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**ORAL PRESENTATIONS**

## OP-001 [Endocrine Surgery]

## The Properties Related to the Recovery Time of Parathyroid Function in Hypoparathyroidism After Thyroidectomy

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**Objective:** Hypocalcemia is the most common complication after thyroid surgery. It is believed that acute parathyroid failure is the main cause of hypocalcemia after bilateral interventions. In our study, we aimed to evaluate the preoperative and postoperative characteristics of parathyroid function in patients with postoperative hypoparathyroidism in reference to the time of return to normal values.

**Material and Methods:** Among the patients undergoing total thyroidectomy+central neck dissection between 2014 and 2018, those with PTH<15 pg/mL within the postoperative first 4 hours were included in the study. After thyroidectomy, calcium<8 mg/dL was defined as biochemical hypocalcemia and PTH<15 pg/mL was defined as hypoparathyroidism. The patients were divided into 3 groups according to the time of PTH level to exceed 15 pg/mL. Group 1 was composed of the patients whose PTH value improved in the first 24 hours, Group 2 was composed of the patients whose PTH value improved in 1-30 days, and Group 3 was composed of the patients whose PTH value improved or did not improve after 30 days.

**Results:** As to the distribution of 111 patients according to age groups with a mean age of 49.3+14.4; there were 19 patients (16F, 3M) in Group 1, 67 patients (54F, 13M) in Group 2, and 25 patients (19F, 6M) in Group 3. The rates of vitamin D deficiency were 41.7%, 53.1% and 88.2% in Groups 1, 2 and 3, respectively; the difference was significant (p=0.018). Ca values on the postoperative 0<sup>th</sup> day in Groups 1, 2 and 3 were 8.56+0.46, 8.16+0.66, and 8.1+0.84, respectively; the difference was significant (p=0.028). PTH values on the postoperative 0<sup>th</sup> day were 11.69+2.79, 6.92+3.45, and 4.99+2.36 and the difference was significant (p<0.001). It was significantly lower both in Group 2 and Group 3 (p<0.001) than in Group 1 (p<0.001). Biochemical hypocalcemia rates of Group 1, 2 and 3 on the first postoperative day were 15.8%, 53.7% and 64%, respectively, and there was a significant difference among the groups (p=0.004). Ca values on the postoperative 1<sup>st</sup> day were 8.68+0.67, 8.15+0.66, and 7.75+1 in Group 1, 2 and 3, respectively; the difference was significant (p=0.014). Mg values on the postoperative 1<sup>st</sup> day were 1.85+0.1, 1.77+0.17, and 1.64+0.17 in Group 1, 2, and 3, respectively; the difference was significant (p=0.005). PTH values on the postoperative 1<sup>st</sup> day were 20.54+6.37, 7.07+4.35 and 4.66+3.27, in Group 1, 2 and 3, respectively; the difference was significant (P<0.001). In paired comparisons, it was lower in Group 2 and Group 3 than in Group 1 (p=0.0001, p=0.0001). Mg values on the postoperative 7<sup>th</sup> day were 1.86+0.16, 1.82+0.21, and 1.59+0.15 in Group 1, 2, and 3, respectively, and the difference was significant (p=0.001). P values on the postoperative 7<sup>th</sup> day in Groups 1, 2 and 3 were 3.71+0.75, 3.88+0.76, and 4.76+0.69, respectively, and the difference was significant (p=0.002). In 106 of the patients, parathyroid function restored to normal values and permanent hypoparathyroidism developed in 5 patients (4.5%).

**Conclusion:** Among the patients with postoperative hypoparathyroidism, the rate of preoperative vitamin D deficiency is higher in those whose parathyroid function improves after 1 month. The rates of parathyroid autotransplantation and iatrogenic parathyroidectomy, which are among the intraoperative factors that may affect parathyroid function, are similar. The patients whose parathyroid function improves after 24 hours have lower PTH levels on the first day. Postoperative low Mg levels may be associated with delayed recovery of parathyroid function.

**Keywords:** Hypocalcemia, hypoparathyroidism, parathyroid, PTH, postoperative

## OP-002 [Endocrine Surgery]

## Our Experience of Transoral Endoscopic Thyroidectomy/Parathyroidectomy Vestibular Approach

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**Objective:** Many minimally invasive procedures have been suggested to avoid scarring in the neck region after thyroidectomy. These initiatives do not leave a scar in the neck region, but they do in the other parts of the body. In addition, techniques such as

the transaxillary approach have begun to be abandoned due to large flap dissections and large tissue damage. In this study, we aimed to share our experiences of transoral endoscopic thyroidectomy vestibular approach (TOETVA) and transoral parathyroidectomy vestibular approach (TOEPVA) in our clinic, and to share our early results.

**Material and Methods:** The data of 13 patients who underwent surgery through TOETVA/TOEPVA method between July 2017 and January 2018 were recorded prospectively. All patients were given chlorhexidine mouthwash for preoperative oral care and prophylactic treatment was applied preoperatively with 1 g ampicillin/sulbactam. One 10-mm and two 5-mm ports were used in all surgeries. CO<sub>2</sub> flow rate was set to 6 mmHg. After the creation of subplatysmal space in the area from the oral vestibule to the sternal notch, the midline was opened and thyroidectomy/parathyroidectomy was initiated. All surgeries were performed using conventional laparoscopic instruments and ultrasonic energy instruments in company with intraoperative nerve monitoring (IONM).

**Results:** All patients included in the study were female and the mean age was found to be 43.15±14.4 years. Two patients underwent total thyroidectomy, two patients underwent parathyroidectomy and nine patients underwent lobectomy (7 left, 2 right). The operations of the twelve patients were ended endoscopically. In one patient, conversion to open surgery was required upon the detection of signal loss at IONM. It was determined in the exploration that the anatomical integrity of the nerve was preserved and it was functional. No temporary or permanent recurrent laryngeal or mental nerve injury was detected in any of the patients. Because the pathologic result of a patient was cylindrical cell type PTC, complementary thyroidectomy and central lymph node dissection were performed with conventional surgery 20 days after the first operation. The mean duration of operation was 88.4 (30-130) minutes and the mean hospital stay was 1.3 (1-2) days.

**Conclusion:** TOETVA is a new minimally invasive method that can be applied by entering from natural spaces and can provide thyroidectomy truly without scar. There is always a visible scar in the regions except for the neck in previously defined no-scar methods. Total thyroidectomy, lobectomy and parathyroidectomy can be performed safely with TOETVA in experienced hands.

**Keywords:** Endoscopic thyroidectomy, TOETVA, minimally invasive surgery, transoral, thyroidectomy, parathyroidectomy

## OP-003 [Endocrine Surgery]

# Does Primary Hyperparathyroidism Lead to Unnecessary Diagnosis of Thyroid Papillary Cancer?

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**Objective:** The aim of the study is to investigate the relationship between primary hyperparathyroidism (pHPT) and papillary thyroid cancer (PTC).

**Material and Methods:** Imaging findings and biopsy results obtained for preoperative thyroid in 252 patients operated due to pHPT between January 2014 and December 2017, the pathology results of 28 patients with pHPT+PTC association, and the pathology results of 156 patients who underwent thyroidectomy and were diagnosed with PTC between the same dates were examined retrospectively. The characteristics of tumoral morphology such as tumor diameter and subtype, total number of focus, multicentricity; vascular, perineural and tumor capsular invasion, the presence of calcification, extrathyroidal and intrathyroidal spread were compared in both groups.

**Results:** Thyroidectomy was performed with adenoma excision according to the results of preoperative ultrasonography (USG) and fine needle aspiration biopsy (FNAB) in 43 of 252 patients who were operated due to pHPT. Parathyroid adenoma-PTC association was detected in 22 of these patients. In 10 patients, noticeable and suspicious lymph nodes were excised during the operation, and thyroidectomy was performed when PTC metastasis was detected in one. During the operation, 5 of the 23 patients in whom frozen-section evaluation was performed due to suspicious lesion in thyroid were found to have PTC, and thyroidectomy was performed in the same session. The pHPT+PTC association was found as 11.1% (28/252), and the age averages of pHPT+PTC group and PTC group were found as 56.1±12.4 and 49.0±13.4, respectively (p: 0.01). When tumor morphologies were compared; the tumor diameters of the patients in the pHPT+PTC group were smaller and the tumor capsular invasion was higher (p<0.05).

**Conclusion:** It is emphasized in recent years that pHPT, which is associated with many types of cancer in the literature, may be a risk factor for PTC. This relationship is tried to be attributed to the fact that both organs use the same genes and transcription factors in their development and to their common embryological origins. It is also suggested that high PTH levels, by leading to low vitamin D and an increase in angiogenic factors of hypercalcemia, contribute to thyroid carcinogenesis. On the other hand, according to the report of the International Agency for Research on Cancer, unnecessary diagnosis has actually been considered to be responsible for the increase in the frequency of thyroid cancer seen in recent years. Both increased medical monitoring opportunities and the widespread use of the diagnostic tools such as FNAB in company with USG and USG have led to the detection of small (<1 cm), non-lethal and silent PTCs that do not present any findings in completely healthy individuals. The first im-

aging technique that is used in preoperative localization studies for pHPT is thyroid USG. While the nodules detected in USG force the radiologist and endocrinologist to FNAB, they also attract the attention of the surgeon during the operation. In our study, pHPT+PTC group had a significantly smaller tumor diameter than PTC group and similar morphological characteristics; although this supports the consideration that pHPT leads to the diagnosis of an unnecessary thyroid cancer, high capsular invasion rates are surprising. In this respect, there is a need for molecular studies to compare the expressions of oncogenes and angiogenic factors involved in papillary thyroid carcinogenesis in both groups.

**Keywords:** Hyperparathyroidism, parathyroidectomy, papillary thyroid cancer

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## OP-004 [Endocrine Surgery]

# The Predictive Value of Parathormone Measurement for the Risk of Hypocalcemia Development in the First Hour After Total Thyroidectomy

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**Objective:** Hypocalcemia is the most common complication that can be temporary in up to 27% and permanent in 1% of the patients after thyroidectomy. The appearance of symptoms of hypocalcemia after 24-48 hours can lead to prolonged hospitalization. In this study, we investigated the predictive value of parathormone (PTH) measured at the postoperative 1<sup>st</sup> hour for the hypocalcemia that could develop on the postoperative 1<sup>st</sup> day.

**Material and Methods:** We retrospectively evaluated the data of 287 patients who underwent total thyroidectomy between January 2016 and January 2018 in the Service A of the General Surgery Department of İstanbul Medical Faculty. The patients with the findings of accompanying parathyroid, renal and metabolic bone disease and the patients using drugs that affect bone metabolism were excluded from the study. In all patients; preoperative serum PTH and calcium, PTH (ePTH) at the postoperative 1<sup>st</sup> hour, and PTH (gPTH) on the postoperative 1<sup>st</sup> day were analyzed. Serum Ca levels were corrected according to albumin levels (dCa). The percentage difference between preoperative PTH value and ePTH value was defined as ΔPTH. The value of dCa<8 mg/dL on the post-operative 1<sup>st</sup> day was defined as hypocalcemia. The patients with and without postoperative hypocalcemia were classified as Group 1 (n=48) and Group 2 (n=239). The normal limits of PTH in our laboratory were 15-65 pg/mL, and postoperative PTH<15 pg/mL was considered as hypoparathyroidism. ePTH, gPTH and ΔPTH were compared between Group 1 and Group 2. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of ePTH, gPTH and ΔPTH were examined in hypocalcemia estimation.

**Results:** The mean age of the patients was 47.6±13.8 and the F/M ratio was 220/67. The mean ePTH value in Group 1 was postoperatively 8.5±10.2 pg/mL and 28±17.4 pg/mL in Group 2 (p=0.0001); the mean gPTH value was 10.7±12.5 pg/mL in Group 1 and 28.1±15.7 pg/mL in Group 2 (p=0.0001). Hypocalcemia rates were 40% (40/100) and 4% (8/187) in patients with ePTH value<and ≥15 pg/mL (p=0.001). Sensitivity, specificity, PPV and NPV values for hypocalcemia prediction of ePTH were 83%, 75%, 40% and 95%, respectively. Hypocalcemia rate was found to be 43% (36/83) and 6% (12/204) in patients with gPTH value<and ≥15 pg/mL (p=0.001) (Sensitivity: 75%, Specificity: 80%, PPV: 43%, NPV: 94%). While ΔPTH was 80±24% in Group 1, it was found as 46±31% in Group 2 (p=0.001). In the ROC analysis, the ΔPTH value which predicted the risk of hypocalcemia most significantly was found as 74% (AUC:0.816, Std. Err. 0.034). Hypocalcemia was detected in 11 (6%) of 191 patients with ΔPTH<74% and in 37 of 96 patients (38.5%) with ΔPTH>74% (Sensitivity: 77%, Specificity: 75%, PPV: 38%, NPV: 94%).

**Discussion:** Serum PTH level within the normal limits in the first hour after thyroidectomy can eliminate the risk of postoperative hypocalcemia by 95%. Early postoperative PTH value is equivalent to late PTH level or PTH fall rate in terms of hypocalcemia prediction.

**Keywords:** Hypocalcemia, thyroidectomy, hypoparathyroidism, parathormone

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## OP-005 [Endocrine Surgery]

# What is the Diagnostic Value of Thyroid fine Needle Aspiration Biopsies in Which Liquid-Based Cytology (Sure-Path) Method Applied?

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**Objective:** Fine needle aspiration biopsy (FNAB) is often the first step procedure to evaluate thyroid gland nodules because it is easy, reliable and economical. In addition to the fact that liquid-based cytology (LBC) is a new method developed to evaluate gynecological cytologic specimens; nowadays, it is applied to cytologic materials obtained from thyroid FNAB, because base artifacts are not monitored as well as it has the advantages to provide further assistant examination for the diagnosis and advantages enabling the applications of molecular tests. In this study, we aimed to determine the diagnostic value of this new method in evaluating the thyroid gland nodules.

**Material and Methods:** Between 2014 and 2017, ultrasonography-guided fine needle aspiration biopsy was performed in the thyroid nodules of 7387 patients. According to the Bethesda system, these materials, in which LBC method was applied, were diagnosed as non-diagnostic, benign, atypia of undetermined significance/follicular lesion of undetermined significance (AUS/FLUS), follicular neoplasm, malignant suspicious and malignant cytology. Five hundred and eighty-one patients with surgical resection were included in the study.

**Results:** Of the cases, 16.9% (98/581) were male and 83.1% (483/581) were female. Cytologic evaluation was reported as 4.8% non-diagnostic, 52.8% benign, 12.7% AUS/FLUS, 12.6% follicular neoplasm, 12.6% malignant suspicious and 4.3% malignant cytology. When the post-resection results and cytology were compared; in the histopathological examination, malignancy was detected in 3.6%, 1.6%, 12.2%, 16.4%, 74.3% of the cases evaluated as non-diagnostic, benign, atypia of undetermined significance/follicular lesion of undetermined significance (AUS/FLUS), follicular neoplasm and malignant suspicious, respectively, and in all cases evaluated as malignant. The specificity of thyroid fine needle aspiration biopsies was 100%, whereas the sensitivity was detected as 83.3% only when malignant cytology was accepted positive. When malignant suspicious cases were accepted as positive, this rate increased to 94.1%. False negativity was not observed, and its rate was 0.9%.

**Conclusion:** Liquid-based cytology can be used as an alternative cytologic method to assess thyroid fine needle aspiration biopsies due to its high diagnostic accuracy in distinguishing between benign and malignant thyroid nodules and allowing for further examination.

**Keywords:** Thyroid fine needle aspiration, Liquid based cytology, Sure-Path

## OP-008 [Obesity]

# The Effect of Laparoscopic Sleeve Gastrectomy Surgery on Early and Late Glucose Homeostasis in Diabetic Morbidly Obese Patients

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**Objective:** Obesity is a growing health problem increasing the incidence of many systemic diseases and cancers all over the world. Bariatric surgical procedures have a positive effect on diabetes resolution with the neuro-hormonal action mechanism. It has also been shown that these neurohormonal mechanisms are directly proportionate to weight loss in people who lose weight through non-surgical mechanisms. We aimed to determine the course of blood glucose levels and the diabetes resolution time independent of weight loss in patients with diabetes mellitus in whom we performed laparoscopic sleeve gastrectomy (LSG) due to obesity.

**Material and Methods:** The data of the patients who underwent surgery for morbid obesity in our clinic were retrospectively analyzed. Our study was designed to evaluate the effect of LSG on early and late glucose homeostasis in diabetic patients. The demographic and clinical characteristics of the patients, operation information, preoperative fasting blood glucose and preoperative HbA1c levels, the fasting blood glucose levels on the postoperative 1st, 2nd, 3rd, 4th and 5th days and in the 1st, 3rd, 6th, 9th and 12th months, and the postoperative 1st year HbA1c levels were scanned from the files and recorded. The effect of the body mass index (BMI) (<50 kg/m<sup>2</sup>, ≥ 50 kg/m<sup>2</sup>), 1st year EWL rates, age (≥50 years, <50 years), duration of diabetes (≥5 years, <5 years), and the stomach volume and staple line (> 3 cm, ≤ 3 cm) on the postoperative blood glucose level and diabetic recovery status was examined.

**Results:** A total of 61 patients, 40 of whom were women and 21 were men, were included in the study and the mean age was 43.8±5 years (19-67 years). The mean BMI was found to be 48.8±8.5 kg/m<sup>2</sup> (40.1-100.9 kg/m<sup>2</sup>). Preoperative HbA1c was 7.4±1.1 (6.4-11.6) and the mean level of preoperative blood glucose was 133.6±47.4 mg/dl (90-318 mg/dl). On the postoperative 3rd day, the average level of blood glucose was determined as 100.9±27.7 mg/dl (median: 94 mg/dl). The mean blood sugar level in the first year was found as 86.8±23.1 mg/dl (median 82 mg/dl). HbA1c level was 5.7±0.8 (median: 5.6) in the first year and diabetes recovered in 59 of the 61 patients.

**Conclusion:** Our study confirms the weight-independent healing effect of LSG on high glucose levels in patients with T2DM. The early improvement that is seen independently of weight loss in diabetic patients is remarkable. This improvement, which

we have observed in our cases in our study, is tried to be explained with different mechanisms but its cause has not been fully clarified yet. We are of the opinion that these mechanisms can be clarified by comparing multiple groups with larger case series.

**Keywords:** Diabetes, laparoscopic sleeve gastrectomy, obesity

## OP-009 [Obesity]

# Is Bile Stone Formation After Sleeve Gastrectomy Associated with Weight Loss? Case-Control Study

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**Objective:** Bariatric surgery is the most effective treatment modality for weight loss in morbidly obese patients. One of the long term complications after surgery is gallstone formation. In this study, we aimed to evaluate the association of gallstone formation after bariatric surgery with the percentage of excess weight loss (%EWL).

**Material and Methods:** The study type was planned as case control study. The patients who underwent laparoscopic sleeve gastrectomy (LSG) between March 2015 and March 2017 were included in the study. The patients who previously underwent cholecystectomy, the patients who previously had biliary stone, and the patients who did not undergo ultrasonography (USG) after surgery were excluded from the study. In the postoperative follow-up procedure; USG was requested for all the patients between the 6th month and 1st year after the surgery, and in case of any symptomatic complaint. The study group was composed of the patients in whom gallstones or biliary sludge was detected in USG, and the control group was composed of the patients in whom they were not detected. The %EWL values were recorded at the time of the USG. Demographic parameters such as age, gender, and body mass index (BMI) at the time of surgery were recorded. The groups were compared in terms of demographic parameters and %EWL values. Descriptive statistics were used for statistical evaluation. In the comparison, Chi-square test was used for categorical data, and t-test and Mann-Whitney U test were used for continuous data according to normal distribution status. The data consistent with the normal distribution were expressed as mean±standard deviation, and those not consistent with the normal distribution were expressed as median (quarter interval). Binary logistic regression was used to assess the effect of stone detection. The p value of ≤0.05 was accepted as statistically significant in the analyses.

**Results:** During the study, LSG was performed in 246 patients. Twenty-eight patients with preoperative bile duct stones, 11 patients who previously underwent cholecystectomy and 103 patients in whom USG was not performed during the follow-up were excluded from the study. The population of the study was composed of 104 patients. There were 47 (45%) patients in the study group and 57 (55%) patients in the control group. The mean age was 37.8±11.3 years in the study group and 40,1±10,6 in the control group (p=0,286). The male/female ratios in the groups were 4/43 and 8/49, respectively (p=0.540). The BMI value was found as 47 (9) in the study group and 49 (9) in the control group (p=0.423). These analyses showed that the groups were homogeneously distributed. Postoperative %EWL values were found as 66 (25) in the study group and 58 (20) in the control group (p=0.005). Logistic regression analysis showed that this effect was 1,040 fold. In the ROC curve analysis, %EWL ≥57.5, 70.2% sensitivity and 47.4% specificity were found to be associated with stone development (AUC: 65.9%, p=0.005).

**Conclusion:** After LSG, the formation of biliary stones and biliary sludge is quite excessive. While it was found in our study that the demographic parameters such as age, gender, first BMI did not affect postoperative gallstone formation, %EWL was observed to be effective. In the controls after LSG, the presence of possible gallstones should be revealed by performing USG. Gallstone formation has been observed to be more frequent in patients who lose their excess weight, and care should be paid in terms of gallstone complications that may develop in the future in these patients.

**Keywords:** Sleeve gastrectomy, gallstone, weight loss ratio

## OP-010 [Obesity]

# The Role of p53 Gene Polymorphism in Obese Patients

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The prevalence of obesity is increasing in the world. As the genes causing multifactorial obesity function in different biological tasks; studies about which of the 244 candidate genes reported for obesity actually cause obesity predisposition are being conducted in different societies. More than one gene may be effective in the formation of a single disease, and the polymorphic variants of a single gene may also be effective. Oxidative stress, one of the obesity factors, arises from the imbalance between

reactive oxygen species (ROS) and the antioxidant defense system of the cell. The ROSs increasing in obesity are effective on hypothalamic neurons, and this leads to hunger and satiety control and to weight and body weight control, accordingly. When ROS increases; cell damage, necrosis, and apoptosis occur through the oxidation of DNA, proteins and lipids. Increased oxidative stress in adipose tissue causes metabolic syndrome in the obese. Weight loss due to caloric restriction or exercise reduces oxidative stress. Mitochondrion is the most important source of ROS formation. In the electron transfer system, ROSs that result from oxidative phosphorylation reactions are involved in physiological events such as cell signaling mechanism, cell proliferation and differentiation. The P72R p53 gene polymorphism known to be effective in the formation of many cancer types has been shown to be associated with obesity through the animal experiment performed by Kung, C. (2016). The p53 tumor suppressor protein plays a role in cancer suppression. The p53 protein, which mainly has tumor suppressor activity, acts as transactivation and transcription factor on more than 200 target genes. p53 has been found to be a critical factor in managing natural and adaptive immune responses, reproduction-development, neural degeneration and aging. The focus of recent studies is the association between p53 and metabolism, and it may be important to uncover the role of tumor suppressor function, especially of p53, in metabolism. Due to its important role, p53 is seen as an important point in metabolic diseases. We aimed to determine the role of P72R gene polymorphism in obesity formation in humans. The results of this study will contribute significantly to the determination of the susceptibility to obesity and the regulation of the diet accordingly, and the determination of the individual treatment options according to the genotype of the patient. Our aim is to demonstrate whether the same gene polymorphism in humans is associated with obesity, as in the relationship revealed with animal experiments. For this purpose; the p53 genotype was determined through Real-Time PCR method described by Talseth et al. (2006) in the blood samples of 152 obese patients who were randomly selected between the years 2015 and 2017. In our study, for the first time in the Turkish society, we investigated the role of p53 in apoptosis mechanisms and cell cycle regulation in obesity. In this thesis study planned with this information, the role of p53 was investigated in 152 patients who were diagnosed with obesity and in whom LSG was performed. It has been shown that oxidative stress is increased by p53 mutation in obese patients. It was also found that insulin levels were elevated along with p53 mutation and contributed to oxidative stress. There were no statistically significant associations among BMI, TSH, STD, triglyceride and cholesterol levels in obesity patients. Our study results support the role of p53 in the development of obesity.

**Keywords:** Obesity, oxidative stress, p53, sleeve gastrectomy

## OP-011 [Breast Diseases and Surgery]

# Can Axillary Dissection be Avoided in Patients in whom Sentinel Lymph Node Biopsy is Performed after Neoadjuvant Chemotherapy?

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**Objective:** In patients with locally advanced breast cancer who received neoadjuvant chemotherapy (NAC), it is still being discussed in which patients axillary curage should be avoided. Randomized clinical trials have been continuing in selected patient groups with sentinel lymph node positive disease. We also investigated the factors affecting local recurrence in patients with locally advanced breast cancer (LABC) who were followed up in our clinic, who underwent sentinel lymph node biopsy (SLNB) after NAC and in whom axillary lymph node dissection (ALND) was not performed.

**Material and Methods:** A retrospective study was conducted on 55 LABC patients with at least 2-year follow-up who underwent SLNB and no axillary dissection after NAC, and who were followed up and treated at İstanbul Medical Faculty between October 2003 and July 2015. Chest wall and peripheral irradiation was performed in all patients after NAC following the surgery. The recurrences detected in the axilla and the breast were accepted as local recurrences. Kaplan-Meier test was used for statistical analysis.

**Results:** The median age of the patients was 44 (25-81) years. Clinically, T1-2 was found in 50% of the patients and T3-4 in 50% of the patients before NAC. Aksilla was clinically evaluated as negative at a rate of 37.5% (n=18) and as N1 (47.9%, n=23) and N2-3 (14.6%, n=7) in the other patients. SLNB was detected negative in 38 (69%) and positive in 17 (31%) of these patients (micromet, n=14, macromet, n=3). Breast recurrence was detected in 3 patients (5.5%) within a median follow-up duration of 109 months (24-166), and axillary recurrence was not detected. The 5-year local recurrence-free survival rate of all patients was calculated as 94.4%. The factors affecting local recurrence.

**Conclusion:** In SLNB negativity after NAC and in patient groups with low axillary tumor burden such as micrometastasis in SLNB positivity; good results may be obtained without axillary dissection provided that axillary radiotherapy is performed in patients with LABC

**Keywords:** NKT, breast, ALND, SLNB

## OP-012 [Breast Diseases and Surgery]

# High PDL-1 Expression in Triple Negative Breast Cancer Patients Partially Responding to Neoadjuvant Chemotherapy

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**Objective:** Despite increased studies on PDL-1 expression in breast cancer, the frequency, prognostic and predictive value of PDL-1 expression is contradictory because of the methodology used, scoring differences, and different patient populations used in the studies. In this study, we analyzed the PDL-1 expression in patients with residual tumor burden following neoadjuvant chemotherapy in triple negative breast cancer and its relation to chemotherapy response and prognosis.

**Material and Methods:** Between July 2002 and December 2017, the data of 50 patients, including inflammatory (n=2) and metaplastic type (n=6), who had triple negative breast cancer and treated with neoadjuvant chemotherapy were analyzed retrospectively. PDL-1 expression was examined using the paraffin block sections PDL-1 antibody (rabbit monoclonal antibody; Ventana SP263 Clone kit) of mastectomy tissues in patients' pathology archives through immunohistochemical method. While PDL-1 positivity was defined as > 1% of any membranous staining in tumor and/or stromal lymphocytes, high PDL-1 positivity was considered as moderate-severe staining and/or > 5% in tumor and/or stromal lymphocytes. "MD Anderson Cancer Center Residual Cancer Burden Index" was used to measure chemotherapy response.

**Results:** The median age was found as 47.5 (24-76) years. While 29 of the patients were clinically T3-4 (58%) before neoadjuvant chemotherapy, almost all were N1-3 (96%). All patients received chemotherapy regimens containing anthracyclines and taxanes, and 3 patients received chemotherapy regimens containing additional platinum prior to surgery. While PDL-1 expression was found to be positive in 29 of the patients (58%) in tumor tissue and intratumoral lymphocytes, tumoral PDL-1 expression was positive in 25 of the patients (50%). While PDL-1 expression was positive in stromal lymphocytes in 23 of the patients, PDL-1 expression was detected at a high rate in 22 patients (44%) in the tumor and intratumoral lymphocytes. High PDL-1 expression was shown in tumor and/or stromal lymphocytes in 26 of the patients. The patients with PDL-1 positivity in intratumoral lymphocytes were shown to be more responsive to chemotherapy (59% versus 37%, p=0.157). The mean follow-up period was 28 months (7-161). The 5-year disease-free survival rate (DFS) was 52.6% and the 5-year disease-specific survival rate (DSS) was 48%. There was no significant difference between PDL-1 positive and PDL-1 negative patients in terms of DFS and DSS.

**Conclusion:** These results suggest that PDL-1 is highly expressed in patients with triple negative breast cancer, which partially responds to neoadjuvant chemotherapy. Thus, the inclusion of an immune control point inhibitor therapy in chemotherapy regimens in a triple negative breast cancer patient group with poor prognosis and chemotherapy-resistant tumor clones may contribute to an increase in chemotherapy response and to an improvement in prognosis.

**Keywords:** PDL-1, triple negative breast cancer, neoadjuvant chemotherapy

## OP-013 [Breast Diseases and Surgery]

# Malignancy Risk in Patients with Atypical Ductal Hyperplasia

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**Objective:** Atypical ductal hyperplasia (ADH) does not have as much pleomorphism as ductal carcinoma in situ (DCIS), but it is an atypical abnormal epithelial proliferation. It is a lesion that is detected at 5-15% of the breast biopsies. These lesions are benign, and neoplasia development is considered as a risk marker. We aimed to determine the rates of malignant lesion development in patients whose breast biopsy result is ADH.

**Material and Methods:** The records of patients who were admitted to our breast surgery polyclinic between 2014 and 2017 were retrospectively reviewed. The demographic data, preoperative imaging methods, follow-up period and methods, and surgical type and final pathology results if re-surgery was performed were examined in the patients whose excisional or incisional biopsy results were ADH. The frequency of malignancy development in these patients was investigated.



**Results:** The mean age of 44 patients, 43 female and 1 male, with the diagnosis of ADH was 50 (25-74) years. BIRADS 4 lesions were found in 39 (89%) patients and BIRADS 3 lesions in 5 (11%) patients in the preoperative breast imaging. Thirty-six (81%) patients were followed up radiologically and 8 patients (19%) underwent surgery. In the final pathology reports of the patients who underwent surgery, 3 lobular carcinoma in situ, 2 ductal carcinomas in situ, 1 mucinous carcinomas, 2 microinvasive carcinomas were detected in the ipsilateral side. In two patients, prophylactic mastectomy and reconstructive surgery were performed due to increased risk.

**Conclusion:** Atypical hyperplasia, especially multifocal lesions, has been found to increase relatively from 3.7 to 5.3 in terms of the subsequent cancer risk. Patients with ADH should be followed up with risk reduction strategies; annual mammography and clinical examination twice a year should be recommended. Avoidance of hormone replacement therapy, appropriate diet and lifestyle changes were recommended. While a large excision is needed in patients in whom ADH is found as a result of thick needle biopsy, re-excision is not necessary if ADH positivity is detected in the excision border.

**Keywords:** Atypical ductal hyperplasia, breast cancer, follow-up

## OP-014 [Breast Diseases and Surgery]

# The Effect of Clinoptilolite Use (Froksimun®) on Seroma Formation After Mastectomy in Rats

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**Objective:** Seroma is the most common complication after breast cancer surgery (10-50%). It occurs as a result of lymphovascular fluid leak into the dead space caused by tissue dissection or tissue excision. According to current treatments, abnormal exudative fluid loculation resulting from the prolongation of inflammatory response or the first phase of wound healing is the most important factor in seroma formation. Seroma can cause serious complications such as wound infection, abscess, tissue necrosis and sepsis. Clinoptilolite (Froximun®) covers the surface of the skin and provides wound healing and leakage prevention effects in open wounds with hemostatic, absorbant, antiviral, antifungal, and antibacterial properties. The purpose of this treatment is to demonstrate that clinoptilolite can reduce seroma formation by inhibiting lymphovascular leakage and accelerating wound healing through antiseptis.

**Material and Methods:** Young and female Wistar rats weighing 200-250 g were used in the study. Each of the control and treatment groups were composed of seven rats. Right mastectomy and axillary dissection were performed in the rats. While no application was performed in the control group after the surgery, local clinoptilolite was applied to the treatment group postoperatively. Ten days after the operation, the seroma was aspirated from the mastectomy cavity with a sterile injector, its amount was measured and laboratory parameters (total protein, albumin, lactate dehydrogenase (LDH), total blood cell count, C reactive protein (CRP)) were examined. The rats were sacrificed under anesthesia and tissue samples were taken from the operation site, and pathological evaluations were performed. The samples were evaluated in terms of vascular proliferation, fibrin content, edema, necrosis, congestion, microorganism, polymorphonuclear leukocyte, fibroblast, lymphocyte, macrophage and fibrous tissue enlargement, and granulation tissue formation.

**Results:** At the end of the evaluations, seroma in the treatment group was significantly less than in the control group ( $p=0.02$ ). There was no statistically significant difference in the values of biochemical white blood cell, LDH, albumin and total protein, which were analyzed and compared in the treatment and control groups. In the pathological examinations, the formation of granulation tissue was found significantly higher in the treatment group compared to the control group ( $p=0.006$ ).

**Conclusion:** It was concluded that clinoptilolite could prevent lymphatic and vascular leaks developing after mastectomy and axillary dissection by means of its microporous cage-forming absorbent structure; in addition, it reduced seroma formation by accelerating the wound healing process due to the fact that it has antiseptic properties on the surface that it is used for and has an effect to increase the granulation tissue. Granuloma formation that clinoptilolite provides during the recovery process and the long-term elimination of this structure should be demonstrated with long-termed studies.

**Keywords:** Seroma, mastectomy, clinoptilolite, wound healing

## OP-015 [Breast Diseases and Surgery]

# A Rare Complication in Breast Biopsies with Wire-guided Localization (WGL) Technique: Wire Breakage, the First Series from Turkey with 20-case Analysis

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**Objective:** In the diagnosis of non-palpable breast cancer, breast biopsy with wire-guided localization (WGL) technique has been used in recent years in cases where percutaneous biopsy is not available through imaging methods. Though it is known as a safe procedure, complications can rarely develop. In this study, we analyzed 20 patients in whom wire breakage occurred during the application.

**Material and Methods:** We retrospectively reviewed 818 patients who underwent breast biopsy with wire-guided localization (WGL) technique between January 2015 and June 2017 in our hospital.

**Results:** Twenty wire breakage cases proven by imaging methods were detected in 818 patients in approximately 30 months. The wire was placed through mammography in all patients in whom wire breakage occurred. The mean age of the patients was calculated as 51.3 (41-71). The wire was broken within the specimen in fifteen patients (75%), whereas it was found to have been broken outside the specimen in 5 patients (25%). The wires broken in the specimen were detected radiologically in pieces sent during the operation. Three of the 5 wires that were broken in the specimen were noticed during the manual examination of the lumpectomy site intraoperatively, and the remaining tissue was reexcised. When the remaining two wires were recognized by imaging methods in the post-operative period (one year later), they were removed by using a second wire. In 14 patients (70%), microcalcification was detected as indications of wire insertion, 3 patients (15%) had structural distortion, and 3 patients (15%) had biopsy indication due to focal asymmetric area. The pathology result of thirteen patients (65%) was benign, and it was evaluated as malignant in 7 (35%) patients. While 5 of the malignant patients were operated, prophylactic chemotherapy was initiated in one and follow-up was stopped in the other one of them.

**Conclusion:** Although wire breakage in breast biopsies performed with wire-guided localization (WGL) technique is rarely reported, the exact frequency is unknown. The wire may be broken in specimen or remain in the remaining breast tissue. The remaining wire should be removed in order to prevent possible complications that may occur in the future by coordinating with the radiologist.

**Keywords:** Breast biopsy with wire-guided localization (WGL) technique, wire breakage, non-palpable breast cancer

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## OP-027 [Emergency Surgery and Trauma]

### Bad Surprise in Pathology Report: Appendicular Tumors

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**Objective:** Appendicular tumors are seen quite rarely. Neoplasia is found in appendectomy specimens at a rate of approximately 1%. Of all gastrointestinal cancers, 0.4% are of appendicular origin. The most common group is well differentiated neuroendocrine neoplasms, called carcinoid tumors. In this study, we aimed to evaluate the characteristics of incidental appendiceal neoplasms that we encountered postoperatively in patients undergoing surgical intervention due to suspected appendicitis.

**Material and Methods:** We retrospectively reviewed the files of 800 patients who underwent surgery with the diagnosis of acute appendicitis between January 2012 and December 2017 in our hospital. Ten patients whose pathology results were reported as appendicular neoplasm were included in the study. Age, gender and tumor characteristics of the patients and surgical procedures were recorded.

**Results:** It was observed that the average age of the patients included in the study was 52.7, and 80% of them were female. Pre-operative imaging was performed in all patients. Multiple liver metastases and carcinoid syndrome were found in one patient. Appendicitis diameters were measured as 12.7 mm on average. All patients underwent appendectomy. When pathology reports were examined, carcinoid tumors were found in 9 patients (90%) and adenocarcinoma in 1 patient (10%). Right hemicolectomy was performed in 2 patients after appendectomy. Adjuvant chemotherapy was administered to one of the patients who underwent right hemicolectomy.

**Conclusion:** Appendicular tumors are rarely encountered in patients operated with the diagnosis of acute appendicitis. Appendicular neoplasms are usually asymptomatic in preoperative period. The acute appendicitis clinic often developing due to the clogging of the appendix lumen by the tumor is the first and only symptom. Carcinoid syndrome occurs after liver metastasis develops and is seen in 10% of all carcinoids. The most important findings are flushing, diarrhea, skin markers (e.g. pellegra), bronchospasm and progressive congestive heart failure. For this reason; preoperative evaluation of the patients admitted with acute appendicitis clinic should be done well, the pathology reports must be followed and the treatment options should be

determined according to the results, and the necessary examinations should be made in terms of colorectal neoplasms that can be seen together.

**Keywords:** Appendectomy, appendicular neoplasms, carcinoid tumor

## OP-028 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)] Risk Factors and Clinical Significance of Retropancreatic Lymph Node Metastasis in Patients with Gastric Cancer

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**Objective:** The extent of lymph node dissection (LN) in patients with gastric cancer is still controversial. In this presented study, it was aimed to determine the risk factors for no.13 lymph node metastasis and to examine the clinical importance.

**Material and Methods:** Clinicopathological data of 237 patients diagnosed with gastric cancer between June 2012 and June 2017 were retrospectively reviewed. The patients were divided into 2 groups as those with and without retropancreatic lymph node metastasis. The variables that could be effective for retropancreatic lymph node metastasis were examined.

**Results:** Of the 237 patients included in the study, 71 were female, and 166 were male; the median age was 61 (range: 23-87). Fourteen (5.9%) patients had retropancreatic LN metastasis. In patients with retropancreatic LN metastasis, the tumor was localized in the cardia at a rate of 7.2%, in the corpus at a rate of 42.8%, and in the antrum at a rate of 50%. Tumor diameter was  $\geq 8$  cm (57.1%) in 8 of these patients, 4-8 cm in 3 patients (21.4%) and  $\leq 4$  cm in 3 patients (21.4%). The rates of No. 3, 7, 8, 9 and 12p LN metastasis were 55.2%, 13.9%, 13.9%, 13% and 9.7%, respectively. While the median survival time of patients with retropancreatic LN metastasis was 13.1 months, it was 25.7 months in those without metastasis ( $p=0.01$ ). According to univariate analysis results; tumor diameter  $\geq 8$  cm ( $p=0.001$ ), Bormann type III/IV ( $p=0.014$ ), undifferentiation ( $p=0.002$ ), presence of angiolymphatic invasion ( $p=0.001$ ), invasion depth (pT4) ( $p=0.015$ ), N3 stage ( $p=0.0001$ ), (P=0.0001), No. 9 ( $p=0.0001$ ), and No.12p ( $p=0.0001$ ) LN metastasis were found to be associated with retropancreatic LN metastasis. According to the results of multivariate analysis; tumor diameter  $\geq 8$  cm (OR: 1.079, CI: 1.012-5.283,  $p=0.009$ ), Bormann type III/IV (OR: 1.312, CI: 1.004-2.577,  $p=0.007$ ), Undifferentiation (OR: 1.576, CI: 1.020-2.871,  $p=0.001$ ), pT4 tumor invasion depth (OR: 4.767, CI: 1.940-5.787,  $p=0.0001$ ), N3 stage (OR: 4.054, CI: 2.879-5.787,  $p=0.0001$ ), No. 9 LN metastasis (OR: 1.118, CI: 1.021-3.665,  $p=0.015$ ) and No. 12p LN metastasis (OR: 1.008, CI: 1.010-2.174,  $p=0.001$ ) were found as independent prognostic variables in terms of retropancreatic LN metastasis.

**Conclusion:** Retropancreatic LN metastasis is a poor prognostic factor in patients with gastric cancer. It is thought that the addition of retropancreatic lymph node to the LN dissection may be important because of the retropancreatic lymph node metastasis in case of tumor diameter  $\geq 8$  cm, Bormann type III/IV, undifferentiated tumor, pT4, N3 stage, No. 9 and No.12p LN metastasis.

**Keywords:** Retropancreatic lymph node, stomach cancer, risk factor

## OP-029 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)] Do probiotics have a place in *Helicobacter pylori* eradication treatment?

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**Objective:** Lansoprazole+amoxicillin+clarithromycin is one of the most frequently used protocols for *Helicobacter pylori* eradication. However, the success rates in treatments with this protocol decrease over time due to the developing resistance. In addition, due to side effects of medication, the treatment is substantially left half finished. Our aim in this study is to investigate the effects of adding probiotics containing *Lactobacillus acidophilus*+*Bifidobacterium animalis* subsp. *lactis* to the classic triple treatment protocol on the success of HBP eradication and on the formation of side effects.

**Material and Methods:** In the results of the biopsy taken from the patients in whom endoscopy was performed between September 01, 2015 and December 31, 2017; the patients with helicobacter (HBP)+were divided into two groups as lansoprazole+amoxicillin+clarithromycin (Group 1) and lansoprazole+amoxicillin+clarithromycin+*Lactobacillus Acidophilus*+*Bifidobacterium Animalis* Subsp. *Lactis* (Group 2). The data of all patients were recorded in the SPSS program. After the patients in both groups were treated for 14

days, the treatment was continued with lansoprazol 30 mg for 45 days. Fifteen days after the end of the medical treatment, helicobacter antigen in the stool was examined and the results were recorded. How many days after and because of which side effects the patients left the treatment unfinished was recorded. After all the data were collected, it was planned to investigate the effects of adding probiotics to the triple therapy on the success of HBP eradication and on reducing the side effects of triple therapy. Statistical analyses between the two groups were performed with chi-square test.  $p < 0.05$  was accepted as the level of significance.

**Results:** Three hundred and forty-eight patients who were helicobacter+according to the results of the biopsy performed with endoscopy between September 01, 2015 and December 31, 2017 were included in our study. The mean age of the patients was 53 (17-88) years. One hundred and ten patients were treated with lansoprazole+amoxicillin+clarithromycin (Group 1) and 238 patients were treated with lansoprazole+amoxicillin+clarithromycin+Lactobacillus Acidophilus+Bifidobacterium Animalis Subsp. Lactis (Group 2). Fifteen of the 110 patients in Group 1 and 11 of 238 patients in Group 2 left the treatment unfinished because of side effects. In Group 1, the rate of discontinuation of the treatment due to side effects was 13.6%, whereas this rate was 4.4% in Group 2. There was a significant difference between the two groups in favor of the group in which probiotics were added to the treatment for serious side effects ( $p=0.003$ ). It was seen that HBP eradication was provided in 77 of 110 patients (70%) in Group 1 and 212 (85%) of 238 patients in Group 2 in respect to HBP test results in the stool after the completion of treatments. There was a significant difference in terms of HBP eradication between the two groups in favor of the group in which probiotics were added to the treatment ( $p=0,000$ ).

**Conclusion:** The addition of the probiotics containing *Lactobacillus acidophilus+Bifidobacterium animalis* Subsp. lactis to lansoprazole+amoxicillin+clarithromycin treatment, which is one of the most commonly used protocols, decreases the incidence of side effects that cause to leave the treatment, and significantly increases the rate of success in the treatment.

**Keywords:** *Helicobacter pylori*, triple therapy, probiotic

## OP-030 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)]

# Transition time to the Primary Abdominal Closure (PAC) After Terminating the Vacuum-Assisted Closure (VAC) Application in the Intraabdominal Sepsis

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**Objective:** Vacuum-assisted closure (VAC) is an open abdominal relaparotomy method that has been used in intraabdominal sepsis since the late 1990s. This retrospective study was planned in order to evaluate the termination time of VAC application and transition to primary abdominal closure (PAC).

**Material and Methods:** Between April 2010 and January 2017, the data of 159 patients who underwent VAC were documented, and Apache IV score, Mannheim peritonitis index and Sequential Organ Failure Assessment Score (SOFA) were found. The VAC change of the patients was done once every 72 hours and the data in the 1st, 2nd, 3rd, 4th changes were documented. The patients who underwent VAC for necrotizing fasciitis and Fournier's gangrene were excluded from the study. ANOVA analysis was performed in repeated measurements to detect the time-dependent changes in Apache IV score, Mannheim peritonitis index and SOFA score.  $P < 0.05$  was considered statistically significant. Analyses were performed with NCSS 11 (Number Cruncher Statistical System, 2017 Statistical Software) program.

**Results:** It has been determined that the VAC change has a reducing effect on the Apache IV score. It was determined that there was a significant difference between the 1st change and the 3rd change ( $p=0.0001$ ), between the 1st change and the 4th change ( $p=0.0001$ ), between the 2nd change and the 3rd change ( $p=0.0001$ ), between the 2nd change and the 4th change ( $p=0.0001$ ) and between the 3rd change and the 4th change ( $p=0.0001$ ). VAC changes have been found to have a reducing effect on Mannheim peritonitis index measurements. It was determined that there was a significant difference between the 1st change and the 2nd change ( $p=0.0001$ ), between the 1st change and the 3rd change ( $p=0.0001$ ), between the 1st change and the 4th change ( $p=0.0001$ ), between the 2nd change and the 3rd change ( $p=0.0001$ ), between the 2nd change and the 4th change ( $p=0.0001$ ) and between the 3rd change and the 4th change ( $p=0.0001$ ). When the effect of VAC change on SOFA values was examined; it was determined that there was no significant difference between the 1st change and the 3rd change ( $p=0.0001$ ), between the 1st change and the 4th change ( $p=0.0001$ ), between the 2nd change and the 3rd change ( $p=0.0001$ ), and between the 2nd change and the 4th change ( $p=0.0001$ ). Although there is no significant difference between the 1st change and the 2nd change, and between the 3rd change and the 4th change; when the averages of the measurements were examined, a decrease was detected in the course of time.

**Conclusion:** It is known that VAC application does not reduce the intraabdominal inflammatory substances; on the contrary, it increases them. For this reason, the Mannheim peritonitis index should be the basic criterion in deciding to discontinue VAC ap-

plication in the form of PAC. The VAC application of the patient with reduced Mannheim peritonitis index should be terminated and should be converted into PAC. The prolonged VAC application does not have a reducing effect on the sepsis picture.

**Keywords:** Intraabdominal sepsis, VAC application, VAC termination

## OP-031 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)]

# The Comparison of the Results of Laparoscopic and Open Surgery in Patients Undergoing Distal Subtotal Gastrectomy Due to Gastric Cancer

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**Objective:** Stomach cancer is the fourth most common cancer type worldwide and is the third most common cause of cancer-related deaths. Laparoscopy was first used in 1994 by Kitano et al. in stomach cancer surgery. After 1994, many studies reported the advantages provided by laparoscopy such as less postoperative pain, earlier onset of bowel movements, less hospitalization, and earlier mobilization. We aimed to compare the results of laparoscopy and open surgery in patients operated due to gastric cancer in our clinic.

**Material and Methods:** We retrospectively evaluated 69 patients who underwent open subtotal gastrectomy (SG) and laparoscopic subtotal gastrectomy (LSG) at Selçuk University School of Medicine Hospital between 2011-2017.

**Results:** The mean age of the cases in our study was 77.5 (94-39) years. Of the patients, 47 were male and 22 were female. LSG+R & Y gastrojejunostomy was performed in 14 of these patients, and SG+R & Y gastrojejunostomy was performed in 55 of them. When two groups of patients were compared in terms of the initiation of oral feeding and hospitalization; the oral feeding of the patients who underwent open surgery was started on the 4th day, and the patients were discharged on the 8th day postoperatively. In patients who underwent LSG, oral feeding was started on the 4th day, and the patients were discharged on the 6th postoperative day. When the pathologic results of the patients in whom laparoscopic methods were applied were examined, a total of 15,8 lymph nodes were removed, and 22.6% of them were metastatic and 77.4% were non-metastatic. Six of the patients had vascular and perineural invasion. At the depth of tumor placement; there were six serosal, 1 subserosal, 1 mucosal and 5 submucosal invasions. When the localization was examined, the focus was observed in the antrum in 5 patients and in the small curvature in 9 patients. The mean follow-up duration of the patients was 2.39 years (6th-7th years). Only 1 patient died because of non-operative causes during the follow-up in our clinic. In the postoperative follow-up, endoscopic examination revealed recurrence in the anastomosis line in 1 patient, but the patient was referred to medical oncology because peritoneal carcinomatosis was observed in imaging. A total of 19 lymph nodes were removed in the patients who underwent open surgery, and 30.5% of them were metastatic and 69.5% non-metastatic. There was vascular invasion in 33 patients and 35 patients had perineural invasion. At the depth of tumor placement, 1 patient had invasion exceeding the serosa, and there were 21 serosal, 11 subserosal, 9 muscularis propria, 6 submucosal, 8 mucosal invasions. As to their localizations; lesions were seen in the corpus-antrum in 3 of the patient, in the antrum in 30 of them, in the pylorus in 3 of them and in the small curvature in 11 of them. These patients were followed up for an average of 2.8 years (3 months to 7 years). In the postoperative follow-up, recurrence was seen in 3 patients but it was accepted as inoperable because of distant organ metastases. Recurrence was detected in 2 patients in the endoscopic control. While completion of gastrectomy was performed in one patient, the other patient was referred to the medical oncology due to peritoneal carcinomatosis.

**Conclusion:** The superiorities of laparoscopic surgery to open surgery have generally been mentioned in comparative studies performed in the literature. Despite the advantages of LSG laparoscopic surgery; we have observed in the results of our study that follow-up duration and the number of removed lymph nodes are similar in both groups. Therefore, open SG is replaced by LSG in clinics experienced in laparoscopic surgery over time. We think that the results in our clinic will be statistically more significant with the increasing number of cases.

**Keywords:** Subtotal gastrectomy, laparoscopic subtotal gastrectomy, laparoscopy, gastric cancer

## OP-032 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)]

# Robotic Distal Subtotal Gastrectomy and D2 Dissection in Stomach Cancer: Single Center Early Period Experiences

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**Objective:** Gastric cancer is among the common gastrointestinal cancers, and the efficacy of the surgery applied in the treatment of operable cases is still the most effective factor on survival. As in many general surgery operations, robotic surgery has been applied in stomach cancer surgery in recent years and very successful results have been obtained. In this presentation, the experiences of robotic gastric cancer surgery in a single center are presented and technical details are given.

**Material and Methods:** The records of the patients who underwent robotic surgery with the diagnosis of gastric cancer were evaluated retrospectively. The information of the patients was analyzed in terms of demographic data, duration of surgery, rates of transition to open surgery, duration of hospitalization, histopathologic results and early postoperative period results.

**Results:** Six of the nine patients who underwent robotic surgery with the diagnosis of stomach cancer between June 2016 and November 2017 were male (66.6%) and 3 were female (33.4%); the mean age was found to be 57 (38-72). All patients underwent robotic subtotal gastrectomy and D2 dissection surgery. The Vinci S<sup>®</sup> robotic system (Intuitive Surgical Inc., Sunnyvale, CA, USA) was used in these applications. While reconstruction after resection was applied as omega-loop gastrojejunostomy in 1 patient (11.1%), Roux-N-Y gastrojejunostomy was performed in the other patient (88.9%). The mean duration of surgery was 271 minutes (margins: 220-325 minutes) (average console duration: 186 minutes; margins: 155-220 minutes). After omentum separation procedure was laparoscopically performed in all of the patients, the process was continued with the robotic system. All procedures were completed in robotic system in 7 patients (77.7%), whereas in two patients (22.2%), mini-laparotomy was performed for anastomosis after resection and lymphatic dissection were completed with robotic system. No surgical problems were encountered in the early postoperative follow-up, and the mean duration of hospitalization was found as 5.6 (4-8) days. Surgical margins were determined as tumor free in the histopathologic examination, and the number of lymph nodes removed was found as 25.6 on average (range: 19-45). There was no recurrent disease or metastasis within an average of 9 (6-14) months of early clinical follow-up.

**Conclusion:** Nowadays, robotic surgery has become a prominent method for many surgical applications because of the technical advantages it offers. It gained a larger scope of application after its efficacy was shown also in oncological surgeries, and it was started to be applied successfully in surgeries requiring extensive lymphatic dissection, such as stomach cancer.

**Keywords:** D2 dissection, stomach cancer, robotic, subtotal gastrectomy

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## OP-033 [Colon and Rectum Surgery]

# Advancement Flaps and Treatment Results in Anal Stenosis Treatment

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**Objective:** Anal stenosis is a condition that can occur after all the pathologies causing scar formation in the anoderm but it is frequently seen due to surgical trauma. It is a special problem because it causes serious social and medical problems for the patient; however, it is preventable. In our study, we aimed to present the results of the patients we operated on with the help of advancement flaps due to anal stenosis.

**Material and Methods:** The demographic and clinical characteristics of 10 patients who were operated due to anal stenosis developing depending on hemorrhoidectomy between 2012 and 2018 in our clinic were retrospectively reviewed.

**Results:** Nine (90%) of the patients were male and 1 (10%) was female. The mean age was 54 (27-81) years. Eleven operations were performed in a total of 10 patients. Hemorrhoidectomy was the etiology in all patients. The most common complaints were pain during defecation in 5 (50%) patients and difficulty in defecation in 5 (50%) patients. Surgical treatment was performed with V-Y advancement flaps in 4 (40%) patients, with House advancement flaps in 3 (30%) patients, with Dufourmental advancement flaps in 1 (10%) patient and with Diamond advancement flaps in 2 (20%) patients. The length of stay at the hospital was 2 (1-3) days. In one patient, wound infection was seen and medical treatment was applied. The follow-up period was 39 (6-72) months. Because of the continuing complaints and recurrence, diamond advancement flap was applied for the second time in one patient. No recurrences were observed during the follow-up.

**Conclusion:** The best treatment of anal stenosis is to prevent the emergence of this complication. For this reason, surgical procedures which can cause anal stenosis should be avoided. We think that treatment methods such as dilatation and stricturoplasty applied in anal stenosis are not effective and increase the risk of incontinence. For this reason, we use advancement flaps in our patients operated for anal stenosis in our clinic. Effective and good results are obtained with the advancement flaps applied in anal stenosis.

**Keywords:** Anal stenosis, hemorrhoidectomy, advancement flap

## OP-034 [Colon and Rectum Surgery]

## The Evaluation of Overall Survival in Patients who Had Operation for Colorectal Cancer in Our Hospital

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**Objective:** Colorectal cancer is the third most common cancer type and it is in the 3rd place in cancer-related deaths in women and men. Overall 5-year survival is about 60-65%. In our study, the survival and the affecting factors were investigated in the patients who were operated due to colorectal cancer in our hospital.

**Material and Methods:** We retrospectively reviewed 169 patients who underwent emergency or elective surgery due to colorectal cancer, in whom resection could be performed, and whose information could be accessed between 2012 and 2016 in our hospital. The age, gender, emergency/elective surgery, the presence of diverting stoma, tumor location, T, N and M, lymphovascular invasion, tumor differentiation status, comorbidity status, the presence of early complications, the status of stay in intensive care unit, whether or not blood replacement was applied, and general survival information of the patients were recorded. Statistical analyses were made using SPSS 20. The statistical analysis of survival was performed with Kaplan-Meier and multivariate analysis with Cox regression model.

**Results:** The median age was 64 (28-88) years and the male-female ratio was 79/90. The median follow-up period was 28.7 (1-72) months, the 3-year survival rate was 66.6%, and the 5-year survival rate was 58.4%. As to the three-year survival rates according to the stages; it was 77.8% in stage 1, 84.2% in stage 2, 50% in stage 3, and 33% in stage 4. As a result of univariate analysis; advanced age, the presence of comorbid factors, early complications (anastomotic leakage, cardiac and pulmonary complications), post-operative blood replacement, lymph node positivity, T stage, the presence of systemic metastases and lymphovascular invasion were found to be statistically associated with the survival in a negative way. As a result of multivariate analysis; the negative effect of age, postoperative blood replacement, the presence of early complication, LN positivity, and systemic metastasis on survival was observed to continue.

**Conclusion:** In our study, patient age, lymph node involvement, the presence of systemic metastasis, and the presence of early complication were the factors that have an independent effect on colorectal cancer survival, and our findings are compatible with the literature.

**Keywords:** Colorectal cancer, survival, surgery

## OP-035 [Colon and Rectum Surgery]

## The Effect of Increased Tendency to Endoscopic Procedure on the Change in Sigmoid Volvulus Treatment

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**Objective:** Sigmoid volvulus is an emergency surgical condition, and leads to pictures such as obstruction, ischemia, perforation, and peritonitis. We compared the last 5 years with the previous 5 years in terms of diagnosis, follow-up and treatment.

**Material and Methods:** The follow-up and treatment of the patients diagnosed with sigmoid volvulus in Emergency Surgery Unit in two 5-year periods between January 1, 2008 and December 31, 2012, and between January 1, 2013 and December 31, 2017 were compared.

**Results:** Between 2008 and 2012, the number of patients was 83, and 43 of them were female and 40 were male; the average age was 64.2 years. The diagnosis was made with SDAG and CT in 83 (100%) patients. The number of patients undergoing colonoscopy was 51 (61%). The number of patients in whom colonoscopy was not performed was 32 (39%). A successful reduction occurred in 35 (42%) patients with colonoscopy. Forty-eight (58%) patients were operated. In the following 5 years, between 2013-2017, the number of patients was 104; 56 of them were female and 48 were male, and the average age was 62.9 years. One hundred and four patients (100%) were diagnosed with SDAG and CT. The number of patients undergoing colonoscopy was 94 (90%). The number of patients in whom colonoscopy was not performed was 10 (10%). A successful reduction occurred in 84 (81%) patients with colonoscopy. Twenty (19%) patients were operated.

While surgery was at the forefront in the period of 2008-2012, it was not required in most of the patients due to successful reduction by colonoscopy in the period of 2013-2017, and surgery-related morbidity and mortality were not observed in this group of patients. The development in medicine can be seen in the table. Colonoscopy was performed in 51 (61%) of patients with sigmoid volvulus in the first period and in 94 (90%) patients in the second period. While the operation rate in the first period was

58%, it was 20 (19%) in the second period. With the transition to colonoscopic reduction and its positive results, the follow-up without surgery has become the first proposal in the literature for sigmoid volvulus. The level of consciousness among the surgeons has also increased, and they tend to colonoscopic reduction. Elective surgery is recommended after the acute emergency surgery problem is solved, and most of the time, the Hartman operation still remains reserved for patients whose ischemia, peritonitis, perforation or reduction is not successful.

**Conclusion:** Diagnosis was made at a rate of 100% in sigmoid volvulus with SDAG and CT in both periods. Successful reduction with colonoscopy was possible in 81% of patients in the second 5 years. The number of emergency surgery patients in the first 5-year period decreased from 58% to 19% in the second 5 years. The increase in the number of endoscopic procedures, knowledge and experience has reduced the morbidity and mortality in the interventions.

**Keywords:** Endoscopy, volvulus, treatment

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## OP-036 [Colon and Rectum Surgery]

# Is Robotic Surgery Safe in Rectal Cancer Accompanied by Multiple Co-Morbidities? A Retrospective Cohort Study

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**Objective:** Minimally invasive approaches whose first practices were in the scope of the general surgery in 1980s have become rapidly widespread and have now become the first choice surgical method for many abdominal surgical procedures. Thanks to the development of patient care; the patients who were previously in the group of patients at risk for open surgery have begun to be evaluated for the possibility of being a candidate for minimally invasive surgery. In this article, when the facts that colorectal cancer patients with multiple co-morbidities are encountered more often and that robotic surgery is being used increasingly are combined; it is investigated whether or not robotic surgery applications are reliable in this group of patients who are evaluated to have high risk.

**Material and Methods:** We retrospectively reviewed the data of patients who were older than 65 years, had at least 2 comorbid diseases, and who underwent surgical treatment with the diagnosis of early stage rectum cancer at the General Surgery Clinic of Sakarya University between January 2011 and November 2017. The cases were divided into three groups (open, n=41, laparoscopic, n=29 and robotic resection, n=16) in terms of the surgical method that was performed. The patients in three groups were evaluated in terms of age, gender, distribution of comorbid diseases, body mass index, ASA score, duration of operation, postoperative complication, distal and radial surgical margin positivity, number of dissected lymph nodes and mortality.

**Results:** Of the 86 patients who were evaluated, 34 (39.5%) were female, 52 (60.5%) were male, and the mean age was 70.3 (65-86). The most common comorbid disease was DM (65.5%) and HT (56.1%), and ASA score was found to be 3 in 75.9% of them. When evaluated in terms of oncologic and general outcomes; the duration of surgery in the robotic surgery group was significantly longer than the other 2 groups ( $p<0.001$ ), T-stage was higher in the laparoscopic group ( $p=0.009$ ), and there was no difference in terms of the mean number of dissected lymph nodes. Although there was no statistically significant difference between the groups in terms of complications separately, the necessity for re-operation was higher in the open surgery and laparoscopic groups than in the robotic group ( $p=0.046$ ).

**Conclusion:** Minimally invasive methods have proved to be satisfactory in the surgical treatment of colorectal cancers. We think that the long duration of surgery in robotic surgery is not adversely affecting outcomes in patients who are considered to have high risk due to the presence of co-morbid diseases, and that robotic surgery can also be safely applied in this patient group.

**Keywords:** Comorbidity, minimally invasive surgery, rectum cancer

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## OP-037 [Colon and Rectum Surgery]

# The Classification of Pilonidal Sinus Disease According to Physical Examination, Ultrasonography (USG) and Magnetic Resonance (MR) Imaging Findings

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**Objective:** Pilonidal sinus is a common disease that arises from the hair follicles located in the sacrococcygeal region, occurs in young ages, and adversely affects the patient's life. In the literature review, we did not find a study based on the findings of physical examination, ultrasonographic and magnetic resonance imaging in the classification of the pilonidal sinus. In a previous study on classification, imaging studies were not used although the patients were classified according to the physical examination findings. In this study, we aimed to make a classification based on clinical, ultrasonographic and magnetic resonance imaging, which will provide objective criteria for the diagnosis, treatment and recurrence of pilonidal sinus.

**Material and Methods:** This study involves the patients who were admitted to Necmettin Erbakan University General Surgery Clinic of Meram Medical Faculty between 2015 and 2016, and were diagnosed with pilonidal sinus disease. After receiving the necessary anamnesis information, the physiological examinations were performed. Subsequently, magnetic resonance (MR) and ultrasonography (USG) imaging were performed to determine the relationship of the pilonidal sinus with the subcutaneous tissues and environment, and the data were prepared on an individual basis.

The patients were categorized in 3 groups by taking the average of sum of depth and width of MR and USG images. In this group, the patients with acute abscess considered as stage 2 according to navicular region classification were excluded from the category.

**Results:** Of the 68 patients participating in our study, 82,4% (56) were male and 17,6% (12) were female. While the average age of men was 25,89±8,97, the average age of women was 23,33±8,15. They were divided into 3 groups according to the average of the sum of the length and width of the magnetic resonance imaging. As the mean values increased, it was seen that the hospital stay, the inability to go to work and the frequency of surgical procedure increased. The frequency of surgical procedure was found statistically significantly different (p=0.001).

**Conclusion:** Stage 1: The patients whose average of the sum of depth and width in MR or USG imaging is less than 15 mm. Conservative approach will be more appropriate for these patients than surgery. Stage 2: The patients whose average of the sum of depth and width in MR or USG imaging is between 15 and 30 mm. Conservative approach should primarily be considered. Stage 3: The patients whose average of the sum of depth and width in MR or USG imaging is more than 30 mm. Surgical treatment should be considered as a priority. As a result, we obtained a meaningful classification based on MR and USG. We reached the conclusion that the classification of the patients according to MR and USG data may be meaningful in terms of treatment procedure and patient information. Our study will provide a guidance for large-scale studies to be done with more patients in the next period.

**Keywords:** Pilonidal sinus, ultrasound, magnetic resonance, classification

## OP-038 [Colon and Rectum Surgery]

# The Place of Tibial Nerve Stimulation in the Treatment of Fecal Incontinence

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**Objective:** Sacral nerve stimulation with percutaneous tibial nerve stimulation (PTNS) is a neuromodulator method used in the treatment of fecal incontinence. In this study, short-term results of percutaneous tibial nerve stimulation applied in our clinic are presented.

**Material and Methods:** Forty-seven patients who were admitted to our clinic with the complaint of fecal incontinence between January 2015 and January 2017 and were considered suitable for the criteria were included in our study. In addition to the demographic data such as age, height, weight, body mass index; the etiology of incontinence, the incontinence scores before and after the treatment, number of sessions, and endoanal ultrasonography and anal manometry results were retrospectively recorded.

**Results:** The mean age of 47 patients in whom tibial nerve stimulation was started was 50.3, and 63.8% of them were female. Treatment was started due to incontinence in 94.28% (n=33) of the patients and due to constipation in 5.72% (n=2). Incontinence was seen in 55.6% (n=26) of the patients who had incontinence treatment, in 17% (n=8) of them due to trauma, and in 27.6% (n=13) due to idiopathic reasons. A total of 47 patients with incontinence had a Wexner score of 15.48 on average before beginning the treatment. The mean Wexner score of 39 patients who completed the treatment was 8.66.

**Conclusion:** PTNS provides improvement in both incontinence scoring and quality of life in selected cases. Due to low cost, lack of complication risk, no need for hospitalization and easy administration, it has become to be preferred in more patients.

**Keywords:** Fecal incontinence, tibial nerve stimulation, benign anorectal diseases

## OP-043 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# The Management and Outcomes of a Perforation associated with Endoscopic Retrograde Cholangiopancreatography and Sphincterotomy

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**Objective:** Perforation after endoscopic retrograde cholangiopancreatography (ERCP), used especially in distal biliary obstructions, is a rare but highly mortal complication. Conservative treatment, except for some special cases, is widely accepted nowadays, whereas surgery was at the forefront in perforations after ERCP in previous years. In our study, we evaluated the results of patients who were admitted to our clinic due to perforation after ERCP.

**Material and Methods:** Between 2006-2017, we retrospectively reviewed the patients admitted to UUMF General surgery clinic due to perforation after ERCP. The age, gender, ERCP indications, perforation diagnostic method after ERCP, treatment applied, duration of hospitalization and outcomes were reviewed. Radiologically, according to computed tomography (CT) findings; the patients were evaluated as those with retroperitoneal air, those with contrast extravasation, those with intraperitoneal air, and those with both retroperitoneal air and contrast extravasation. The decision of which patient would undergo conservative treatment and which patient would undergo surgery was taken by the surgeon on the basis of the physical examination and radiological findings.

**Results:** Forty-three patients were hospitalized due to perforation after ERCP. The mean age of the patients was  $58.2 \pm 16.2$ . ERCP was performed in 1 patient due to benign stricture, in 5 patients due to periampullary tm, and in 37 patients due to choledochus stone. While thirty-one of these patients were followed up in a conservative way, surgical treatment was performed in 12 patients. There were no statistically significant differences between the group (Group A) treated with conservative therapy and the group (Group B) treated with surgery in terms of age, gender and ERCP indications. The patients with retroperitoneal air in CT constituted 90% of Group A and 40% of Group B. In Group B, 60% of the patients had more severe radiological findings such as the association of contrast extravasation and/or retroperitoneal air ( $p=0.0018$ ). While the duration of hospitalization in group A was 10 (1-38), it was 16 (1-95) in group B ( $p=0.06$ ). While 2 of the patients followed up in a conservative way died, mortality was seen in 5 of 12 patients who underwent surgery ( $p=0.005$ ).

**Conclusion:** As long as the clinical findings permit, the conservative treatment is superior to surgical treatment in perforations after ERCP in patients evaluated to have mild radiological findings such as retroperitoneal air. Nevertheless, it was observed that radiological findings and prognosis were worse in patients undergoing surgery and the length of hospital stay was significantly longer.

**Keywords:** Surgery, perforation, sphincterotomy

## OP-044 [Emergency Surgery and Trauma]

# What is the Length of the Common Femoral Artery, on which Pressure can not be Applied with Standard Military Extremity Tourniquets?

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**Objective:** Rapid and excessive blood loss due to inguinal (junctional) injuries is reported to account for 19.2% of the preventable deaths in the pre-hospital period. In order to constitute the basis for the design of the junctional tourniquet that the Turkish security forces need; we designed a study to determine the length of the common femoral artery (CFA) between the inguinal ligament and the upper border in which standard extremity tourniquets could be applied.

**Material and Methods:** CT angiographies of abdominal aorta and/or lower extremity arteries taken for different clinical diagnoses in 101 patients were retrospectively investigated. The length of the CFA between the inguinal ligament (IL) and the external groin line (EGL) was measured. In addition, the lengths between CFA and spina iliaca anterior superior (SIAS), and between CFA and symphysis pubis (SP) were measured. A total of 202 inguinal site measurements, on the right and left, were made in each patient and the results were compared statistically. Measurements were presented as mean ( $\pm$ SD).

**Results:** Ninety-three (92%) of the patients were male. The mean ( $\pm$ SD) ages of the male and female patients were  $51\pm 19.3$  and  $51.2\pm 19.4$  years, respectively. When the patients were divided into  $<40$  and  $>60$  age groups according to their ages, the distribution of age frequencies was measured as 30 (30%) and 71 (70%), respectively. The mean CFA length was measured as  $45.3\pm 11.7$  mm and  $47\pm 11.3$  mm in the right and left groins, respectively; the mean femoral artery length on which compression could be applied with groin tourniquet was measured as  $50\pm 14.7$  mm in the left groin and  $50.8\pm 16.5$  mm in the right groin. CFA lengths of men were significantly longer. Left and right groin measurements were evaluated in terms of CFA lengths, SIAS-CFA, CFA-SP, EGL-IL and no statistically significant differences were found. Interestingly, in the  $\geq 41$  age group, the left and right groin CFA-IL lengths were significantly higher. In two cases, the external iliac artery was separated directly into the branches of the femoral artery at the inguinal ligament level.

**Conclusion:** This is the first descriptive study made for this purpose in the literature. Groin tourniquet is life saver. We now have information on what features a groin tourniquet should have in order for our security forces to apply quickly with a high success rate even at night, after a short training time.

**Keywords:** Combination, vessel, injury, bleeding, tourniquet

## OP-045 [Emergency Surgery and Trauma]

# Identified Deficiencies and Proposals for Solutions in the Reports of Forensic Cases Admitted to Istanbul University Istanbul Medical Faculty Trauma and Emergency Surgery Polyclinic

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**Objective:** Forensic case is defined as a case whose biological, psychological and social well-being is deteriorated or is suspected to be deteriorated by an external impact. Physicians frequently encounter forensic cases during polyclinic services in emergency services and conduct forensic medicine services, one of their main responsibilities, and prepare forensic reports.

In our study; it was aimed to discuss the solutions related to the evaluation of the forensic reports prepared for the forensic cases in Istanbul Medical Faculty Hospital Trauma and Emergency Surgery Polyclinic and to the elimination of their failing sides within the frame of general medical approach, medical ethics and regulations.

**Material and Methods:** In this descriptive and retrospective study, the reports of adult and child forensic cases referred to Istanbul Medical Faculty Trauma and Emergency Surgery Polyclinic between July 01, 2014 and June 30, 2017 were assessed by means of a checklist created in terms of the features to be included in a forensic report, and the data were recorded.

**Results:** It was found that 21500 patients were admitted to Trauma and Emergency Surgery Polyclinic between the dates included in the study, and 5399 reports were issued; 25 of the existing reports were excluded from the study because they could not be read, and 410 of them could not be reached in the archive. When the distribution of the evaluated 4964 forensic reports was examined according to event types; it was found out that 39.5% of them were caused by traffic accidents and 9% of them were sharp object injuries. It was detected that details such as admission date in 96.6%, admission time in 95.2%, type of admission in 5.5%, date of event in 88.3%, time of event in 81.3%, and story of event in 12.9% had been recorded, and 4% of the cases of falling down from height/falling were evaluated as forensic cases. In forensic reports, it was determined that there were information deficiencies such as report number, date-time of issuing report, reason for referral, identification of the examined person, story of the event, date-time of examination, location of lesions, and lesion dimensions.

**Conclusion:** While the physicians in emergency polyclinic service give curative services in forensic cases, they have to fulfill their forensic medicine responsibilities such as keeping complete forensic records, investigating and keeping any material that carries medical evidence after the examination, reporting to judicial authorities and preparing legal reports. It is clear that the deficiencies found in the judicial reports will cause a failure in the judicial process. This shortcoming brings both institutional and personal responsibility. It is necessary to document the traumatic changes in the body of the forensic case and to prepare a detailed and justified report in accordance with the basic approach stated in the health and legal regulations. Yoğun For a standardized forensic case management in accordance with the current conditions; providing this service with a team of forensic medicine discipline by separating this burden from the treatment service will contribute to the maintenance of in-service training on approach to forensic cases after graduation and to eliminating the identified shortcomings of the multidisciplinary approach.

**Keywords:** Forensic case, forensic report, forensic medicine, physician's responsibility

## OP-046 [Emergency Surgery and Trauma]

# Is Follow-up Possible with Tomography After Penetrant Left Thoracoabdominal Trauma?

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Traumatic diaphragmatic injuries (TDI) are rare but significant thoracoabdominal injuries that are life-threatening, independent of incision size. Untreated and/or undiagnosed cases may often result in herniation into organs in the thoracic cavity, shortness of breath, and even death. Surgical treatment options have not changed much from past to present. However, the development of radiology and imaging techniques has made it easier to diagnose TDI.

When the literature is reviewed, the incidence of TDI is observed to be between 10% and 15% after penetrant injuries. However, 6038 (0.63%) patients were seen to have diaphragm injuries in a review in which 565 trauma centers participated and which was conducted with 952,242 patients. It is difficult to give the true incidence of TDI because of missed out and delayed diagnoses.

The aim of our study is to investigate the diagnosis of TDI through urgent CT taken prior to surgery.

We found that 317 patients were admitted to our clinic due to sharp object injuries (SOI) in the past 5 years. It was seen that there were 145 (46%) patients who were hemodynamically stable, injured in the left thoracoabdominal region and underwent diagnostic laparoscopy (DL). The data of these patients were retrospectively scanned from their files. Ages, genders, pre-operative abdominal/thoracic computed tomography (CT), durations of operation, length of stay in hospital and the operations performed in the patients were reviewed.

The mean age of the patients was 30 (max: 71, min: 14) and male-female ratio was 19:1 (n: 137: n: 8). The mean duration of operation was 102 minutes (max: 270 min, min: 30 min) and the duration of hospitalization was 4 days (max: 21 min: 1).

Of the 145 patients who were operated on, 74 (51%) had diaphragm rupture and the diaphragm was repaired during the operation. In the CTs of these patients taken before the surgery, 12 (16%) patients were suspected to have diaphragmatic rupture. Although no suspicious rupture was seen in 62 (84%) patients in CT, diaphragmatic rupture was detected in the operation.

Sensitivity of CT in left penetrant TDI was found as 16% and specificity as 97%. It is seen in the literature that the sensitivity is between 17 and 87.2%, and the specificity is between 72.4 and 97%. We consider that this was caused by the fact that tomographies taken for diaphragmatic rupture were reassessed and that the radiologist paid attention to this matter.

In our study, it is seen that the rate of diaphragm injuries in left thoracoabdominal SOI is higher. We think that the admissions and/or referrals of specific and deep injuries to our clinic have caused this situation.

As a result, left thoracoabdominal SOI cases should be evaluated as emergency conditions and decisions should be taken accordingly. In most studies in the literature, the radiologist interprets tomography under elective conditions, and this increases the diagnostic rate of the radiologist through tomography. However, this is not consistent with today's practice. For this reason, despite the developing technological and radiological methods, DL is still an indispensable method for diagnosis and treatment of the left thoracoabdominal sharp object injuries, even if the tomography is negative.

**Keywords:** Thoracoabdominal, SOI, diagnostic, tomography, laparoscopy

## OP-047 [Emergency Surgery and Trauma]

# A Service Hospital or an Outpost Surgery Hospital: A One-Month Temporary Duty Experience

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General surgery services are given in training hospitals of the state and foundation universities, in public hospitals of the Ministry of Health and in private hospitals. General surgery specialists, like the specialists of other branches, can also serve in other hospitals with temporary appointments at different times. As a general surgery specialist assigned temporarily; we performed a prospective analysis of the cases in whom surgery and medical observation were performed during a monthly service in Hakkâri State Hospital.

The demographic data such as age and gender of the cases were classified. Medical history, physical examination and laboratory findings were recorded. The surgical indications of the cases, the type of anesthesia performed, and the type of performed

surgery were examined. The cases were analyzed in terms of postoperative morbidity, mortality, and the indications and applications of referrals to advanced-level hospitals. According to this, 63.15% of the cases required emergency surgical intervention. Of the cases, 44.73% were diagnosed with surgical acute abdomen. Surgical indications and types of surgery are presented in. Two patients (5.26%) with surgical indications did not accept surgical treatment. Damage control surgery was performed regarding liver and colon injuries in a patient who was admitted due to firearm injuries. A patient admitted due to an in-car traffic accident was monitored in our hospital until the time of transfer for observation and medical treatment to an advanced center due to grade I liver injury.

We consider that the data analysis that we present will be a pilot study regarding simultaneous provision of service for both the cases with catastrophic firearm injuries and the cases of elective-emergency surgery carried out in an outpost surgical hospital, which also provides health care services for the citizens.

**Keywords:** Provisional appointment, outpost surgical hospital, advanced level hospital

## OP-048 [Emergency Surgery and Trauma]

# The Place of Respiratory Hydrogen in the Diagnosis and Follow-up of Experimental Intestinal Obstruction Model

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**Objective:** Although surgery is avoided in the treatment of intestinal obstructions due to postoperative adhesions, which constitute an important part of the admissions to emergency surgical services, there is no single reliable indication that can direct the clinician during follow-up. In this study, we aimed to determine whether breath hydrogen levels can be used alone as a diagnostic and follow-up parameter in intestinal obstructions, and to determine the relationship between breath hydrogen levels and bacterial burden.

**Material and Methods:** Male and adult Wistar albino rats were randomly divided into three groups consisting of equal number of subjects: The control group (n=8), the group which had an intestinal obstruction in the first 24 hours and whose intestinal obstruction was opened in the second 24 hours (n=8), and the group with intestinal obstruction for 48 hours (n=8). The breath hydrogen measurements of the subjects were non-invasively performed while fasting and 1, 3 and 5 hours after carbohydrate loading with the Bedfont brand Gastrolzyer breath hydrogen monitor. During the experiment, stool samples were taken for microbiological analysis. At the end of the experiment, the subjects were sacrificed with an overdose anesthetic agent.

**Results:** While there was no significant difference in fasting hydrogen values among the groups on the first day ( $p>0.05$ ), a difference was observed between the control group and the group with temporary obstruction on the second day, and between the control group and the group with permanent obstruction on the third day. While there was no significant difference between the control group and the group with permanent obstruction in the breath hydrogen values at all hours after the carbohydrate loading on the first day ( $p>0.05$ ), a significant difference was observed on the second (after obstruction) and on the third (obstruction continuing) days ( $p<0.001$ ). While there was no difference in breath hydrogen values between the control group and the group with temporary obstruction at all hours after carbohydrate loading on the first day ( $p>0.05$ ), a difference was observed on the second day ( $p<0.05$ ), and no difference was observed between these two groups on the third day ( $p>0.05$ ). After carbohydrate loading, there was a statistically significant difference between the group with temporary obstruction and the group with permanent obstruction at all hours on the first, second and third days ( $p<0.05$ ). However, when the inter-group changes in breath hydrogen values within the three days were examined; it was observed that there was no statistical difference in the control group ( $p>0.05$ ); there was a statistically significant increase in breath hydrogen values along with the occurrence of obstruction in the group with temporary obstruction ( $p<0.001$ ) and a statistically significant decrease ( $p<0.001$ ) after the obstruction was opened; there was a statistically significant increase ( $p<0.001$ ) in breath hydrogen values along with the occurrence of obstruction on the second day in comparison to the first day, and on the third day in comparison to the second and the first days. It was found that there was a correlation between the percentage of the hydrogen value changes among the days and the percentage of bacterial changes ( $p<0.001$ ), and that this relationship was in the strongest level in the third and fifth hours after carbohydrate loading.

**Conclusion:** In our study, it was seen that breath hydrogen values increased significantly with intestinal obstruction, continued to increase significantly as the obstruction continued, and significantly decreased when the obstruction was eliminated. It was determined that the change in breath hydrogen values was associated with intestinal bacterial burden.

**Keywords:** Intestinal obstruction, breath hydrogen, intestinal flora

## OP-049 [Emergency Surgery and Trauma]

# The Significance of Trypsinogen Activation Peptide in Serum and Urine for the Diagnosis of Acute Pancreatitis

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**Objective:** Today, acute pancreatitis is one of the most important problems of medicine with high mortality and morbidity. Early identification of the severity of the disease is crucial for determining the need for intensive care, ensuring appropriate and adequate treatment, and determining the effectiveness of treatment. In this study, biochemical markers that can be used to detect pancreatitis severity and early prognosis were studied.

**Material and Methods:** A total of 38 patients diagnosed with acute pancreatitis according to clinical and laboratory findings were included in the study group. Blood and urine samples of the patients were taken at the time of admission, 24 and 48 hours later, and clinical evaluations were made. In each patient, amylase, creatine phosphokinase, blood leukocyte, serum trypsinogen activation peptide (TAP), urine TAP values, Apache-II disease severity score and Ranson pancreatitis mortality criteria were recorded in three time periods.

**Results:** A significant correlation was found between the Apache-II score of the patients *and* the leukocyte and serum TAP values at the admission as well as between the Apache-II score at 48th hour *and* the C-reactive protein (CRP) and serum TAP values at 48th hour. A significant correlation was found between leukocyte count at 48th hour and the Apache-II score, CRP and serum TAP values at 48th hour. There was no statistically significant correlation between urinary TAP and leukocyte at the admission or 48th hour. When serum TAP and urine TAP values of the patients at the admission, 24th and 48th hours were compared with the control groups, the difference was significant for all three time periods.

**Conclusion:** We noted that serum and urine TAP values increased approximately three-fold in patients with acute pancreatitis compared to healthy individuals. We found the values of the patients to be high as of the first admission.

**Keywords:** Acute pancreatitis, trypsinogen activation peptide, trypsinogen-2

## OP-050 [Hepatobiliary Surgery]

# Iatrogenic Biliary Tract Injuries: The Results of a Tertiary Clinic

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**Objective:** The aim of this study is to discuss the injuries of bile ducts occurring during laparoscopic cholecystectomy (LC) with the data of our clinic.

**Material and Methods:** In this study, 66 patients who were treated due to bile duct injuries and strictures during LC in Ondokuz Mayıs University Medical Faculty General Surgery Clinic between January 2008 and January 2018 were examined retrospectively.

**Results:** Seventeen (26%) of the patients were male, and 49 (74%) of them were female; the mean age was 56.5 (26-91). Ten of the patients (15%) were referred to our clinic after experiencing biliary injuries in our clinic and 56 (85%) after experiencing biliary injuries in other centers. In 16 (24%) of these patients, a biliary injury was detected intraoperatively and open surgery was initiated. Endoscopic retrograde cholangiopancreatography (ERCP) was performed in 57 cases (86%) for diagnostic and/or therapeutic purposes.

Twenty-six (39%) of the patients had reoperations due to biliary injury and/or stenosis. Forty (60%) patients were treated only with ERCP. A stent was placed in the bile duct of 28 (42%) of the 40 patients who underwent only ERCP, and the other 12 (18%) patients benefited only from sphincterotomy.

When we classified biliary tract injuries, we found 34 (51.5%) patients in Strasberg Type A, 1 patient (1.5%) in each of Strasberg Type B and C, 3 (4.5%) patients in Strasberg Type D, 7 (10.6%) patients in Strasberg Type E1, and 6 (9%) patients in Strasberg Type

E2; 14 patients with obstruction in bile ducts were evaluated according to the modification of Bismuth Classification for biliary strictures. According to this, 1 (1.5%) patient was classified as Type 2, 10 (15%) patients as Type 3 and 3 (4.5%) patients as Type 4.

It was seen that Roux-N-Y Hepaticojejunostomy was performed in 19 (73%) of the 26 patients, choledochoduodenostomy was performed in 3 (11.5%) of them, T-Tube was placed in the choledoch in 3 (11.5%), and primary repair was performed in the cystic stump in 1 (4%). While the mean duration of hospitalization was 19 (4-50) days in patients who were operated, it was 20 (45-10) days in patients treated with ERCP. None of the patients died.

**Conclusion:** Bile duct injuries and/or benign strictures are life-threatening complications, which mostly occur due to LC surgery. Although LC has a number of advantages over open cholecystectomy, it is known that the rate of biliary injury is higher than that of open cholecystectomy.

It has been reported that when the biliary tract is injured, the execution of the repair surgery by a surgeon experienced in hepatobiliary surgery, not by the surgeon who performed the first surgery, is an important factor increasing the success of the second surgery. Of our patients, 85% (56 patients) were referred to our clinic for consultation from other centers and all were successfully treated. In biliary tract injuries; early diagnosis and multidisciplinary approach in the coordination of experienced hepatobiliary surgeons are the keystones for the best results.

**Keywords:** Laparoscopic cholecystectomy, biliary tract injury, hepaticojejunostomy

## OP-051 [Hepatobiliary Surgery]

# The Effect of Bleomycin Chemoembolization in Minimally Invasive Treatment of Symptomatic Giant Liver Hemangiomas

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**Objective:** The treatment of patients with giant hepatic hemangioma is controversial. The usual treatment for symptomatic giant hemangioma is surgery; however, minimally invasive techniques have recently been proposed as an alternative treatment. In this study, we aimed to assess the effect of embolization with bleomycin-lipiodol mixture on the symptomatic healing and the size of hemangiomas in the treatment of symptomatic giant liver hemangiomas.

**Material and Methods:** Seventeen patients with symptomatic giant hemangiomas [10 female, 7 male; Age range 35-67 (mean 46,41±2,6)] who were admitted to our clinic between August 2014 and October 2016 were prospectively assessed. Bleomycin was administered along with lipiodol in selective arterial embolization. The patients were followed up by clinical, laboratory and abdominal tomography (mean 14.47±2.21 months). Statistical analysis was performed using SPSS version 15.0 and p=0.05 was considered statistically significant.

**Results:** While the mean volume before hemangiomas was 1799.3 cm<sup>3</sup> (ranging from 480 to 9925.1 cm<sup>3</sup>), it was 405.7 cm<sup>3</sup> (ranging from 38.7 to 3856 cm<sup>3</sup>) one year after the intervention. Mortality or morbidity related to treatment was not observed. Symptomatic improvement was observed in all patients and significant volume reduction was achieved (p=0.001).

**Conclusion:** Minimally invasive bleomycin embolization is an alternative and effective treatment for surgery in patients with giant symptomatic hepatic hemangiomas.

**Keywords:** Bleomycin, liver, hemangioma, chemoembolization

## OP-052 [Hepatobiliary Surgery]

# Treatment Options in ERCP Perforations: Surgical or Conservative Treatment?

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**Objective:** ERCP is an invasive method for the diagnosis and treatment of pancreatobiliary diseases. With the introduction of less invasive imaging modalities such as MRCP and endoscopic ultrasonography, ERCP has been started to be used rather for

therapeutic purposes. Complications related to ERCP have been reported to be between 0.08% and 10% in the literature. The most common complication is perforation. Perforation rates have been reported to be between 0.08% and 2% in the literature and mortality between 3% and 20%.

We aimed in our study to evaluate the management of perforation and the perforation cases due to ERCP performed in our hospital in the last 10 years.

**Material and Methods:** Between January 2006 and January 2018, 8568 ERCP cases performed in the General Surgery endoscopy unit were examined. ERCP reports and hospital records were evaluated retrospectively and a total of 10 cases of perforation due to ERCP were detected during this period. Chest X-ray, plain abdominal x-ray, intravenous (IV) and/or oral contrast enhanced abdominal tomography were taken; complete blood count, biochemical values, amylase, lipase and C reactive protein (CRP) values were evaluated. The durations of hospitalization, the duration between diagnosis and surgery, the duration between ERCP and diagnosis, the type of intervention, the rate of morbidity and mortality, and the clinical course of the patients were evaluated.

Close monitoring, intermittent examination, laboratory and radiological examinations were performed in the patients who were followed up in a conservative way. The patient was scheduled for an emergency operation in the case that he/she has at least 2 criteria of SIRS.

**Results:** Of the 8568 ERCP patients, ten patients with post-ERCP abdominal pain were hospitalized with the prediagnosis of perforation after ERCP. Perforation diagnosis after ERCP was made when free air and leakage of contrast material in the abdomen and/or in the retroperitoneal area were detected in the IV and/or oral contrast enhanced tomography, along with fever and/or leukocyte and CRP elevation. Four patients were followed up conservatively, and 6 patients were operated. Two patients with type 4 injuries were operated due to general condition impairment. Two patients died.

The mean age of these 10 patients was 59.8 (19-79) years, and 9 (90%) of them were female and 1 (10%) was male.

The average duration between ERCP and perforation diagnosis was 6.7 hours (1-36). The average duration of hospitalization was 9.7 days (2-27). The average duration of hospitalization was 8.5 days in 4 patients in whom medical treatment was applied and it was 10.5 days in 5 patients who underwent surgery.

**Conclusion:** Timing and correct diagnosis are very important in post-ERCP perforations. Clinical symptoms, imaging modalities and the mechanism of injury occurrence should be evaluated together and the decision of operation should be made accordingly. Close follow-up and medical treatment in patients without septic picture will decrease unnecessary surgery costs and morbidity, and early surgery of the patients who do not respond to medical treatment and in whom infection signs develop may prevent mortality and morbidity.

**Keywords:** Surgery, ERCP, perforation, retroperitoneum

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## OP-053 [Hepatobiliary Surgery]

# The Efficacy of Percutaneous Cholecystostomy Catheter in High-Risk Patients with Severe Acute Cholecystitis

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**Objective:** In our study, we aimed to evaluate the efficacy of percutaneous cholecystostomy in the treatment of the patients diagnosed with acute cholecystitis.

**Material and Methods:** Between January 2011 and January 2018, medical records of 84 patients who were diagnosed with severe acute cholecystitis and in whom cholecystostomy was inserted in Başkent University Medical Faculty General Surgery Clinic were reviewed retrospectively.

**Results:** Of the patients who were diagnosed with severe cholecystitis and in whom cholecystostomy catheter was inserted in our clinic, 51 (60.7) were male and 33 (39.3) were female. The mean age was 71.2 (28-94). While all patients had the complaint of pain at the time of admission to the hospital, 15 (17.8%) patients had nausea and vomiting, and 12 (14.3%) patients had fever. The duration beginning from the onset of complaints to the time of admission to the hospital was 5.7 (1-30) days on average, and the duration until the insertion of cholecystostomy was 6.8 (1-36) days on average. Seventy-eight (92.9%) patients had at least one additional systemic disease (hypertension in 47 (55.9%) patients, coronary artery disease in 22 (26.2%) patients, diabetes in 21(25%) patients, chronic obstructive pulmonary disease in 19 (22.6%) patients, chronic renal failure in 9 (10.7%) patients, malignancy in 6 (7,1%) patients, and other systemic diseases in 44 (52.4%) patients). Acute-stoned cholecystitis was detected in



68 patients (81%) at the time of admission and cholecystostomy catheter was inserted in 16 patients (19%) with the diagnosis of acalculous cholecystitis. Biliary wall thickness was found to be 5.1 mm (3-13) on average in the ultrasonography of the patients performed at the admission. Cholecystostomy-related minor complications developed in sixteen (19%) of the patients. Cholecystectomy was performed in thirty-two (38.1%) patients an average of 79.5 (20-705) days after cholecystostomy insertion (20 patients underwent laparoscopic surgery, conversion to open surgery was required in 5 patients, 7 patients underwent open surgery). A cholecystostomy catheter was inserted again because recurrence developed cholecystitis in 6 of 52 (61.9%) patients in whom cholecystectomy had not been performed.

**Conclusion:** Cholecystostomy catheter is an effective treatment modality for the control of inflammation in high-risk patients with severe cholecystitis. It can be used as a definitive treatment in patients who can not be operated or who do not accept surgery.

**Keywords:** Acalculous cholecystitis, acute cholecystitis, cholecystostomy

## OP-054 [Hepatobiliary Surgery]

# Immunoregulation in Systemic Inflammatory Response Syndrome in Patients With Acute Calculous Cholecystitis

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**Objective:** The frequency of postoperative complications (10%-45%) and the mortality rate (11.8%) after acute calculous cholecystitis make this pathology one of the current problems in abdominal surgery. The number of disappointing results is growing in the case of acute calculous cholecystitis complicated with systemic inflammatory response syndrome (SIRS). However, adequate methods in the regulation of cytokine profile changes in patients suffering from acute calculous cholecystitis and its complications associated with SIRS have not been developed yet.

The aim is to investigate the effects of metabolic immunomodulator glucotxim on the cytokine imbalance in patients with acute calculous cholecystitis and its complications associated with SIRS.

**Material and Methods:** The presence of various forms of SIRS on the background of acute calculous cholecystitis and its complications were identified on the basis of clinical and laboratory findings suggested at the ACCP-SCCM consensus conference (Chicago, 1992). Depending on the type of conservative therapy carried out postoperatively, the patients were divided into two groups: 32 patients were included into Group I (SIRS 2, 11 patients; SIRS 3, 8 patients; SIRS 4, 7 patients; and septicemia in the background of acute calculous cholecystitis, 6 patients) that received generally accepted conservative therapy, and 30 patients included Group II (SIRS 2, 14 patients; SIRS 3, 9 patients; SIRS 4, 7 patients; and with sepsis, 6 patients) who received complex conservative therapy with glucotxim in different doses, taking into account the depth of cytokine immunosuppression and SIRS forms. In each of the two groups, in dynamics the proinflammatory (TNF $\alpha$ , IL-6) and anti-inflammatory (IL-4, IL-10) cytokines were identified in blood serum.

**Results:** In the preoperative period, the peripheral blood TNF $\alpha$  concentration was 8 times ( $p < 0.001$ ); IL-6, 15.5 times ( $p < 0.001$ ); and IL-4, 8.7 times higher compared to healthy individuals in Group I, but the level of IL-10 was less than 42.2% ( $p < 0.001$ ). After surgery, although the cytokine imbalance extended to the 3rd day in patients from this group, it was subsequently normalized, but on the 7th day of the study, a statistically accurate level of TNF $\alpha$  was found to be 6.2 times; IL-6, 13.1 times; IL-4, 5.5 times; and IL-10 concentration was 16.8% lower than in healthy individuals.

Due to the immunoregulation with glucotxim in patients from Group II, on the postoperative 7th day, the levels of TNF $\alpha$ , IL-6, and IL-4 statistically decreased compared to Group I and were 44.8%, 73.2%, and 61.9% lower, respectively. The level of IL-10 significantly approached the normal level.

It should be noted that the extent of cytokine imbalance directly depends on the SIRS form and sepsis: When the number of SIRS criteria and time of sepsis are increased, the cytokine dysfunction is extended. Also, the immune-regulating effect of glucotxim directly depends on SIRS forms and sepsis.

**Conclusion:** 1. On the background of acute calculous cholecystitis and its complications during SIRS, the depth of cytokine imbalance directly depends on the form of SIRS and sepsis, and conventional complex therapy cannot eliminate this imbalance.

2. Taking into account the SIRS form and sepsis, applying of glucotxim at different doses in a complex therapy during the postoperative period significantly reduces the cytokine imbalance and decreases the number of irritable-inflammatory complications by 3.4 times.

## OP-055 [General Surgical Diseases]

# Early and Late Period Results of Cytoreductive Surgery and Hyperthermic Intraoperative Intraperitoneal Chemotherapy Applications in Patients with Peritoneal Surface Malignancy

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**Objective:** Cytoreductive surgery (CRS) and Hyperthermic Intraoperative Intraperitoneal Chemotherapy (HIPEK) are accepted as a treatment option in patients who are diagnosed with Peritoneal Surface Malignancies. Early and late outcomes of the patients admitted to the Peritoneal Cancer Treatment Center of Turkey are reported in this study.

**Material and Methods:** The results of the patients operated until 2013-2018 were evaluated.

**Results:** One hundred and twenty-six interventions were performed in 124 patients. The mean age of the patients was 54.9±8.75 (34-72), and 83.9% (104) of them were female while 16.1% (20) were male. The average intervention duration was calculated as 9 hours 30 minutes±2 hours 56 minutes. The majority of the tumors were originated from colorectal (53.2%) and ovary (35.5%). The mean Peritoneal Cancer Index was 16.89±11.46 and the mean blood loss was found as 677.82 and 282.1%. All patients undergoing cytoreductive surgery and HIPEK were followed up in the intensive care unit. Those who had a peritoneal cancer index below 10 were directly extubated. Creatinine elevation developed in 29.8% (37) of the patients, all patients had low magnesium, 1 patient died due to heart failure, 1 patient died due to intracranial hemorrhage, Grade IV-V complication developed in 1.61%, postoperative pneumonia developed in 5 patients, Grade II complication developed in 4.03%, and in the late period, 1 patient had parastomal hernia, and 1 patient had incisional hernia. The mean duration of hospitalization was 8.6±2.1. Disease-free survival was 17.52 months and total survival was determined as 20.25 months.

**Conclusion:** Cytoreductive surgery and hyperthermic intraoperative intraperitoneal chemotherapy are surgical procedures that can extend survival with acceptable mortality and morbidity in patients with peritoneal surface malignancy. The duration of hospitalization can be prolonged due to creatinine elevation and nasocomial pneumonia.

**Keywords:** Cytoreductive surgery and intraperitoneal chemotherapy, and peritoneal surface malignancies

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## OP-056 [Wound, Wound Care and Burn]

# The Comparison of Silver Alginate, Chlorhexidine Acetate and Mupirocin in the Treatment of Extremity Chronic Wounds

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**Objective:** One of the most important problems we encounter in the treatment of extremity chronic wounds is wound infection. Many different products containing topical antibacterial agents are used to control the infection in the dressings of these patients. The aim of this study is to compare the efficacy and results of topical applications with three different antimicrobial products.

**Material and Methods:** The patients with osteomyelitis were not included in the study. The injuries we treated with vascular interventions were also excluded from the study. Wound dressings were performed 3 times a week by the same team. A total of 51 patients who had arterial, venous or diabetic injuries in their limbs and were aged between 36 and 84 years were included in the study. There were a total of 84 wounds in 51 extremities. There were 17 patients in each of the three groups and the patients in the groups were comparable. As of January 2016; 0.5% chlorhexidine acetate-impregnated covers were used in 17 patients in group A that first received the treatment for 1 to 47 weeks (mean 17.5 weeks). Commonly used chlorhexidine acetate is reported to be effective on gram (+), gram (-) and fungal infections. Antibacterial 2% mupirocin pomade, which is reported to be effective on gram (+) and MRSA was applied in 17 patients in group B for 1-50 weeks (mean 15.8 weeks). In 17 patients in group C; covers with silver alginate were used for 1-43 weeks (mean 19.7 weeks). The antibacterial effect of different formations of silver has been known for many years. In recent years, alginate has been used frequently in wounds with excessive exudate.

**Results:** Reduction in wounds was assessed by Wilcoxon sign test and Kruskal Wallis H test. Six of 21 wounds of 17 patients in group A were completely closed (29%). The mean 44.3 cm<sup>2</sup> size of the unclosed 15 wounds before treatment decreased by 11% to 39.4 cm<sup>2</sup>. Fourteen of 36 wounds of 17 patients in group B completely recovered (39%). The mean size of the unclosed wounds was 13.9 cm<sup>2</sup>, which decreased by 61% after the treatment to an average of 5.4 cm<sup>2</sup>. Thirteen out of 27 wounds in the limbs of 17 patients in Group C were completely closed (48,1%). The 36.7 cm<sup>2</sup> average of 14 unclosed wounds decreased by 64% after treatment to 13.2 cm<sup>2</sup>. Significant recoveries were obtained in the wounds of groups A, B and C (p: 0.023, p: 0.0001, p: 0.0001, respectively).

**Conclusion:** The efficacy of topical antimicrobial therapy in extremity wounds is not yet included as a definitive recommendation in any treatment guide. In the literature, there are many studies describing the opposite results with various products. It was determined in our retrospective study that all of the three products that we used provided meaningful improvements. The superiority of mupirocin, whose success was found to be higher than expected, to chlorhexidine may be explained by the fact that the wound sizes in this group were significantly smaller in the beginning. Silver alginate is also seen to be more successful than chlorhexidine. In the literature, there are studies which show that silver alginate shortens wound healing and hospitalization in infected wounds with exudate. In order to achieve definite results in topical wound treatment, there is a need for extensive studies in which many different products are used.

**Keywords:** Topical treatment, silver, chlorhexidine, mupirosin

## OP-058 [General Surgical Diseases]

# The Effect of Developing Robotic Technology on General Surgery Practice: A Countrywide Research

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**Objective:** Robotic surgery is the most technological form of minimally invasive surgery and continues to develop day by day. There are not sufficient researches related to the status and course of robot use in general surgery. We aimed to evaluate the effect of developing robots on general surgery practice in this study.

**Material and Methods:** Robotic surgery operations performed between January 2013 and June 2013 were included in the study. The data were taken from the prospectively recorded database. Patient, surgeon and hospital information was kept secret. The type of operation, the year of operation, the robotic system used (S, Si, Xi), the hospital case-volume and the surgeon case-volume were used as parameters.

**Results:** A total of 12151 robotic operations from 32 hospitals were included in the study. A total of 74 surgeons performed 1887 general surgery operations [colorectal (42.3%), bariatric (18.1%), retroperitoneal (11.2%), upper gastrointestinal (10.1%), hepatobiliary (8.7%)]. Of these operations, 56.5% were completed with S-Si and 43.5% of them were completed with Xi platforms. The type of robot used according to sub-branches is shown in Picture 2. The median number of completed surgeries per hospital was 33 (range, 3-290) and the median number of surgeries per surgeon was 7 (range, 1-276). Of the surgeries, 77% were performed by high case-volume surgeons (75th percentile and above). Since 2015, robotic general surgery operations had been performed in 26 hospital. Twelve hospitals only had S-Si, 12 hospitals only had Xi and 2 hospitals had both robots. After the Xi was started to be used, 48% of the operations were completed with S-Si.

**Conclusion:** Although the use of Xi increases the case-volume significantly in colorectal surgery, it is not superior to S-Si in other general surgery branches. Given the visual superiority and cost advantages of S-Si, the use of S-Si may be considered reasonable if colorectal surgery is not a frequent type of surgery in one department.

**Keyword:** General surgery, minimally invasive surgery, robotic surgery

## OP-059 [Colon and Rectum Surgery]

# Chronic Anal Fissure: A Retrospective Study Comparing the Effectiveness of Medical Treatment and Surgical Lateral Internal Sphincterotomy (Complete and Partial)

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**Objective:** Anal fissure is a longitudinal scar in the anoderm just below the dentate line and is usually found in the posterior midline of the anus. It is one of the most common pathologies of the anorectal region and can alter the quality of life because it causes pain and emotional stress during defecation.

Basically, the treatment of anal fissure involves reducing the sphincter pressure by physical or chemical ways. The American Society of Colon and Rectal Surgeons (ASCRS) also recommends conservative treatment with stool softeners, high fiber diet and warm water sitting bath as initial treatment. The biggest handicap of medical treatment is high recurrence rates. For this reason, lateral internal sphincterotomy (LIS) is still accepted as the gold standard treatment.

In this retrospective study, we planned to make the comparison of the efficacy of topical ointment with diltiazem and nitroglycerin with the surgical lateral internal sphincterotomy (complete and partial).

**Material and Methods:** This is a retrospective study of 550 patients treated at our General Surgery Clinic between January 2010 and October 2017 for chronic anal fissure.

We randomly separated the patients into four groups:

Group A: Treated with topical nitroglycerin ointment

Group B: Treated with topical diltiazem ointment

Group C: Complete lateral internal sphincterotomy was performed

Group D: Partial lateral internal sphincterotomy was performed

By reviewing the patient files retrospectively; demographic data (gender, age), anamneses, symptoms and findings at the time of admission, the examinations in the first-second-fourth and eighth weeks, responses to the treatment (relief of pain and the assessment of fissure erythema and/or inflammation), side effects of the treatment and disease recurrences were evaluated.

**Results:** The clinical characteristics of 550 patients (310 males) included in the study are given in Table 1. Accordingly, there is no significant difference among the groups in terms of gender and age distribution. The primary complaint of many patients was pain and bleeding during defecation, while the other major complaints were constipation, itching and perianal discharge. There was no statistical difference among the groups in terms of pain, itching and perianal discharge; however, the complaints of bleeding and constipation were higher in the surgical groups.

Pain relief and fissure healing results are given in Table 2 and Table 3, respectively.

During the treatment period, there were intermittent headache in a total of 22 patients in group A, and it was severe in 6 of them. Three patients had nausea and 2 patients had arrhythmia in Group B. It was observed that 8 of the 14 patients who did not recover in group C had recurrence, 4 had incontinence (gas incontinence in two patients, fluid incontinence in two patients) and 2 patients had perianal abscess. In group D, 6 of the patients who did not recover had recurrence and gas incontinence developed in 1 patient in the early period. While 4 of the patients in whom recurrence developed were reoperated, the complaints of the patient who had incontinence recovered 6 months after the operation.

**Conclusion:** The results of this study support that complete LIS is the most effective method for chronic anal fissure treatment.

**Keywords:** Anal fissure, complete, LIS, medical treatment, partial

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## OP-060 [Colon and Rectum Surgery]

# Is Lung Graphy Needed Despite Thoracic Tomography in Colorectal Cancer Patients?

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**Objective:** In this study, it was aimed to question the preoperative pulmonary imaging in clinical staging of the patients who were scheduled for operation with the diagnosis of colorectal cancer.

**Material and Methods:** In the result of the retrospective analysis of 680 patients diagnosed with colorectal cancer between January 2010 and December 2017; preoperative pulmonary imaging examinations, laboratory, clinical and pathological results of 101 patients with suspicious lung mass incidentally detected in postoperative thorax tomography were investigated. The records were evaluated with SPSS statistical program.

**Results:** The mean age of the patients was  $61.2 \pm 12.2$  years and the male-female ratio was 0.48 (33/68). The mean follow-up duration was  $27.7 \pm 19.1$  months (range: 1-72 months), and 67 (66.3%) patients lost their lives during follow-up. The expected median overall survival was 32 months (95% CI 23.65-40.34) and 1, 3 and 5-year overall survival rates were 90%, 73.4% and 52.8%, respectively. The tumor was located in the ascending colon in 23 (22.8%) patients, in the transverse colon in 4 (4%) patients, in the descending colon in 32 (31.7%) patients, in the rectosigmoid region in 41 (40.6%) and in the entire colon (FAP) in 1 patient. R0 resection was targeted in all patients. The preoperative Ca 19-9 and CEA median levels were 20 and 10 IU/L. The median values of the number of total and metastatic lymph nodes in the specimen were 14 and 2, respectively. There were lymphatic invasion in 59.4% of the patients, venous invasion in 42.6%, and neural invasion in 30.7%. As a result of pathological staging, 88 patients (87.2%) were reported as stage IIIA. When preoperative chest X-rays were analyzed retrospectively, suspicious nodules were detected in chest x-rays of 24 (23.8%) patients. In the one-way analysis, the presence of preoperative lung and liver metastasis, advanced age, high CEA, CA 19-9, and the presence of metastatic lymph node were statistically significant ( $p < 0.05$ ). In multivariate survival analysis, suspicious nodule in preoperative chest x-ray was observed to be the most effective parameter on mortality with a risk factor of 1.1 (HR: 1,12, 95% CI: 0,169-0,943,  $p = 0,036$ ).

**Conclusion:** Pulmonary metastases are observed in approximately 10% of colorectal cancers, and the nodules located in the lower lobe of the lungs are frequently interpreted in favor of metastasis. The incidence of primary colorectal cancer and lung cancer is 0.6%, and pulmonary metastases alone are observed in only 1-3% of patients. Thorax tomography is more sensitive than chest X-ray in detecting colorectal cancer metastasis (75% vs 33%). In the presence of negative chest radiography before the liver resection, the benefit of the routine use of thorax tomography was questioned until today, because of its low positive predictive value and low advantage. However, as of 2017, thorax tomography is recommended as a routine in the current NCCN Guideline. In this study, the prognostic and clinical importance of pulmonary metastases detected in chest X-ray taken prior to the surgery was tried to be demonstrated, and the predictive value of preoperative chest X-ray was revealed.

**Keywords:** Colorectal cancers, metastatic disease, prognosis

## OP-061 [Colon and Rectum Surgery]

# Surgical Treatment of Pilonidal Sinus Disease with Reverse 'D' Incision Technique

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**Objective:** Different results are obtained with different techniques in pilonidal sinus surgery. The aim is to provide a successful radical treatment with the least recurrence rate. The aim of this study is to investigate the early results of surgical technique applied through reverse 'D' (∩) incision, subcutaneous excision and primary suture in the treatment of chronic pilonidal sinus.

**Material and Methods:** Uncomplicated primary cases with chronic pilonidal sinus were included in the prospectively planned study. The study was carried out on a total of 80 cases. The records of patients who underwent surgery between June 2014-September 2017 were kept prospectively. Surgical excision technique was applied with (∩) incision and primary suture methods in all patients. In addition to (∩) incision, circular elliptical incisions were made around the sinus mouths. The sinus structure was totally removed along with the mouths on the skin after subcutaneous dissection. The skin incisions were closed with primary suture after drain was inserted. Drain was removed on the second day, and skin sutures were removed on the seventh day. Age, gender, family history, duration of disease, pre-operative intervention history, complaints at the admission, number and localization of sinus mouths, early and late complication findings, durations of hospitalization and return to work and recurrence rates were investigated. The patients were followed up for 26.5 (6-45) months on average.

**Results:** The mean age of the 80 patients, 63 male and 17 female, was 27 years (17-60). There was family history in 18 (22.5%) patients. During the preoperative period, the mean duration of the disease was 2.1 years (2 months-20 years) and 22 cases (27.5%) had a history of local intervention and drainage. The average number of sinus mouths was 1.97 (1-4). Wound infections developed in 3 cases and hematoma developed in 2 cases as a local complication in the early postoperative period. The average length of stay at the hospital was 2.5 (2-4) and the average duration to return to work was 2.27 (2-4) days. Recurrence was seen in 1 (1.25%) case during the follow-up period.

**Conclusion:** In primary cases, because there is no skin loss, there is no tension and primary healing is easy after the pilonidal sinus excision performed with reverse 'D' (∩) incision and primary suture method. Surgical treatment with small incision provides appropriate cosmetic and comfortable treatment. The rate of early postoperative complications was low. Recurrence rate was very low in the early follow-up period.

The primary suture closure after pilonidal sinus subcutaneous dissection and excision through reverse 'D' (∩) incision is a simple and effective surgical method that provides a primary healing without tension.

**Keywords:** Pilonidal cyst, pilonidal sinus surgery, minimally invasive

## OP-063 [Colon and Rectum Surgery]

# The Effect of Systemic Carnitine Administration on the Recovery of Colonic Anastomosis in Experimental Sepsis Model

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**Objective:** The aim of this study is to investigate the effects of L-Carnitine, whose positive effects as an antioxidant and on wound healing were also demonstrated, on the healing of colon anastomosis in sepsis model created with cecal ligation and puncture in rats.

**Material and Methods:** Forty Sprague-Dawley rats were used in the study. The rats were randomly divided into 4 groups with ten rats in each (n=10). Laparotomy and colon anastomosis were performed in Group 1 and Group 2. Cecal ligation and puncture (CLP) and colon anastomosis were performed in Groups 3 and 4. In the rats in Group 1 and Group 3, 15 mL/kg intraperitoneal 0.9% isotonic NaCl was administered, and 100 mg/kg intraperitoneal L-Carnitine was administered in the rats in Group 2 and Group 4. The rats were sacrificed on the 5th postoperative day, and anastomotic bursting pressure, histopathological status, and tissue hydroxyproline level were evaluated.

**Results:** While anastomotic bursting pressure and histopathologic results were found to be statistically significantly higher both in non-infected abdomen and in the presence of peritonitis in the subjects in Groups 2 and 4 than in the control group, no statistically significant difference was found in terms of this parameter.

**Conclusion:** In anastomoses performed both in the presence of peritonitis and in the non-infected abdomen; the findings obtained from this study performed in an experimental sepsis model suggest that systemic administration of L-Carnitine will contribute to an increase in the safety of anastomosis by affecting the healing positively.

**Keywords:** Colon anastomosis, anastomosis healing, cecal ligation and puncture, sepsis, L-carnitine

## OP-064 [Wound, Wound Care and Burn]

# In Elderly People, Burn Wounds and After

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**Objective:** Burn is a serious injury that threatens life. The skin that becomes thinner with aging makes elderly people more sensitive to burns in comparison to young people. In addition; their accompanying diseases, lack of general mobility and altered metabolisms make the burn management, which is very complicated even today, more difficult. In our study, we evaluated the results of the elderly in our patient group.

**Material and Methods:** The patients who received inpatient treatment for 12 years were retrospectively reviewed in this study. Gender, age, total burned body surface area, location of burns, cause of burn and mortality of the patients were recorded. The differences between the group of 65 years of age and over and the group of those younger than 65 were statistically evaluated using independent Student's t test, one-way Anova and Chi-square tests, and p<0.05 was considered significant.

**Results:** Of the total 2258 patients, 285 (12.62%) were 65 years and over, and the mean age of this group was 74±7 years. Of the elderly, 50.5% were female and burn incidence was more frequent in them than in the young (p<0.001). The mean percentage of burns was > 18.65±21.02 in patients aged >65 years, and 15.52±20.82 in elderly patients. Of the elderly, 85.8% were injured at home (p<0.001). Of home injuries, 9.4% were caused by house fire (p<0.001). When the burn causes were examined; while flame

burn was most frequent in <65 patients, hot water burns were observed more commonly in older patients (43.5%) ( $p < 0.001$ ). When mortality was examined; while it was 10.1% in the young, it was found as 18.9% in the elderly ( $p < 0.001$ ).

**Conclusion:** The physical, mental and metabolic changes that develop in the elderly due to aging both make the patients more susceptible to injury and make their treatment more complicated. For this reason, special care should be given to preventive measures in elderly patients and in case of injury, treatment should be performed in experienced burn units considering the high mortality rate.

**Keywords:** Mortality, burn, elderly

## OP-065 [Wound, Wound Care and Burn]

# Promising Results in Childhood Scalding Burns; Single Center Results of 177 Cases

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**Objective:** The aim of this study is to examine the epidemiology and consequences of childhood scalding burns within the scope of the literature.

**Material and Methods:** Patient files were retrospectively reviewed in the study. The data related to acute scalding burns, socio-demographic differences, burn location, burn grade, burn type, total burn surface area, clinical outcomes, duration of hospitalization, complete blood count, renal and kidney function tests, c reactive protein, and serum electrolyte levels were collected. The patients were also divided into subgroups based on agents that caused burns such as hot water or hot beverages. In the second subgroup, the total burn surface area was divided into two as  $\leq 10\%$  and  $> 10\%$ . Demographic data and the laboratory data at the time of discharge were compared.

**Results:** A total of 177 (89 female and 88 male) patients were examined. The mean age of the patients was  $2.59 \pm 2.33$ . The most common cause of scalding burn was hot water (n: 162, 91.5%). The other burn injuries were caused by tea or milk. Most of the injuries took place at home (n: 167, 95.5%). In hot drink group, the age of the children ( $p: 0.04$ ), the mean total burn surface area ( $p: 0.02$ ), FFP requirement ( $p: 0.001$ ) and debridement requirement (0.04) were significantly higher in comparison to hot water group. The mean total body surface area was  $15.48 \pm 9.24\%$ . Of the patients, 58.2% had more than 10% of total burn surface area. Only 1 patient died of burn injury. In patients grouped according to TBSA; although the difference between the duration of hospitalization (DH) ( $p: 0.001$ ) and the number of debridement requirements ( $p: 0.01$ ) was statistically significant, the laboratory data at the time of discharge and the rates of mortality were similar in both groups.

**Conclusion:** The best way to manage pediatric scalding burns is to take protective measures. But it must be kept in mind that the results may be excellent even in patients with a total burn surface area above 10% through a good hospital care and patient substitution.

**Keywords:** Burn, scalding burn, children

## OP-066 [Wound, Wound Care and Burn]

# Experience with the Application of Intralesional Recombinant Epidermal Growth Factor in Diabetic Foot Ulcers

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**Objective:** Foot ulcers that occur in diabetic patients are one of the major complications of diabetes. Depending on the deterioration of the quality of life of the patients and deepening of the developing infection, osteomyelitis and amputations cause morbidity.

**Material and Methods:** In our clinic; between August 2015 and September 2017, intra-lesional epidermal growth factor (EGF) was applied to 9 lesions in 8 patients one of whom was female. The mean age of the patients was  $64.7 \pm 9$  years. Three patients were included in chronic hemodialysis program due to chronic renal failure. The mean lesion width was  $17.4 \pm 9.5$  cm<sup>2</sup>. Debride-

ment was applied in six patients before the procedure. After appropriate systemic antibiotic and topical dressing until the wound culture was negative, all patients received 10,7±2,7 doses of EGF. In three patients, local burning and pain were observed which did not interfere with the application, but in one patient, the treatment was terminated after 3 doses due to severe pain, tenderness and tremor.

**Results:** All wounds were completely closed secondary to healing. A patient with a complete occlusion in the main femoral artery underwent amputation 2 months later due to a newly developing ulcer and due to osteomyelitis, which did not respond to medical treatment.

**Conclusion:** Intralesional EGF and conventional treatment applied in a multidisciplinary approach resulted in a reduction of amputation rates, as well as provided a complete wound closure and increased the quality of life of the patients.

**Keywords:** Epidermal growth factor, diabetic foot, wound healing

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## OP-067 [Wound, Wound Care and Burn]

# Does Intralesional EGF Application in Diabetic Foot Ulcers Effect Surgical Treatment?

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**Objective:** In the literature, there are studies showing that intralesional Epidermal Growth Factor (IL-EGF) injection prevents major amputations in advanced diabetic foot lesions. In this study; it was aimed to evaluate the effect of IL-EGF used in Wagner 3-4 diabetic foot ulcers (DFU) on the reduction of amputations, ceasing the progress of prognosis, the number of surgical interventions, and on the duration of healing of the patients.

**Material and Methods:** Nineteen patients who were diagnosed with diabetes mellitus (DM), classified as Wagner 3-4 and received inpatient treatment in our clinic between September 2017 and February 2018 were included in the study. Every other day, 75 mcg IL-EGF was administered to the patients intralesionally in a total of 5 cc solution. The formation of 75% granulation tissue at the wound site and defect closure with graft were evaluated as successful treatment. Amputation and treatment lasting longer than 6 weeks were considered as failure. The demographic data of the patients, wound conditions, wagner classifications, treatments and treatment durations, the number of debridements, debridement related complications, graft conditions, and amputation requirements were evaluated and recorded.

**Results:** Of the total of 19 patients included in the study, 12 (63%) were male and 7 (37%) were female. The mean age of the patients was 63.47. Fourteen of the 19 patients had neuropathy. Nine patients had ischemia. Three patients were classified as Wagner 3, and 16 patients were classified as Wagner 4. The patients did not have sepsis-SIRS findings. While 8 patients received Hyperbaric Oxygen Therapy (HBOT) and 8 patients received negative pressure wound therapy NPWT before the onset of IL-EGF, two patients underwent revascularization procedure. Amputation was proposed to 13 patients at an external center. No amputation was applied to any patient. An average of 6 doses of IL-EGF was administered to the patients. The patients were treated in 28 days on average. Two patients received HBOT as an add-on-therapy. Debridement was applied to the patients once. There has been no progress in the Wagner classification after the treatments in any patient. Nine patients were successfully grafted, the wound was closed spontaneously in 1 patient, and granulation tissue was achieved in 9 patients at the desired level. There was no need for treatment exceeding 6 weeks and amputation.

**Conclusion:** No amputation was required in Wagner 3-4 patients treated with intralesional EGF, and no debridement was required after it was performed once. The mean duration of treatment was found as 28 days in patients with advanced DFU; patients without necrosis and with aseptic DFU can be considered as candidates for IL-EGF.

**Keywords:** Diabetic foot ulcer, intralesional EGF, amputation

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## OP-068 [Wound, Wound Care and Burn]

# The Effects of the Scars in Pedicled Flaps on Flap Survival

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**Objective:** Scar is a pathology that occurs when the wound healing mechanisms take action as a result of the deterioration of tissue integrity and that adversely affects the blood flow in the region where it occurs. In this study, we investigated the negative



effects of the existing scars in the area of scheduled flap, which led to the consideration of other flap options, and investigated the differences that would arise with the change of the direction of the scar.

**Material and Methods:** Twenty-four female Wistar Albino rats were used in the study. In the back region of the rats, a 2x6cm caudal-based flaps were planned on both sides of a 1 cm intact skin island. In the first 12 rats, the left flaps with transverse scar were included in the Group with transverse scar, and the right flaps without scar were included in the control group. In the other 12 rats, the left flaps with an oblique scar were included in the Group with oblique scar and the right flaps without scar were included in the control group.

The groups created for flap investigation were named as follows:

Group 1: The control group (n=24)

Group 2: The group with transverse scar (n=12)

Group 3: The group with oblique scar (n=12)

Following transverse and oblique scar formation in the left flap pedicle, the right flaps forming the control group and the left flaps forming the study group were elevated on the 30th day, and they were sutured in the site where they were elevated. At the end of the 4th day, rats were anesthetized with ether and euthanized. The surviving flap areas on both sides were measured in millimeters. Biopsies including the scars were taken from the study and control flaps for histopathological examination.

**Results:** The total area of each flap was 1200 mm<sup>2</sup>. While the mean flap area with necrosis in scarred flaps was 80.8% in the rats with transverse scars, this ratio was found as 57.6% in scarless flaps. In the rats with oblique scar, the mean flap area with necrosis was 83.9% in the scar group whereas it was 63.3% in scarless control group.

As histopathological findings; while epidermis and dermis components in normal structure were seen in the scarless control group, atrophy in epidermis and dermis, loss of adnexal structures, and fibrosis involving reticular dermis were seen in both scar groups.

**Conclusion:** Scar is a factor that negatively affects the random-flap viability. The direction of the scar did not change the rate of necrosis. It has been concluded that only half of a skin flap, which is normally expected to survive, could survive in the distal region of a scar.

**Keywords:** Flap, necrosis, pedicle, scar

## OP-069 [Breast Diseases and Surgery]

# Breast Cancer in Turkey: The Analysis of 20000 Patients

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**Objective:** Breast cancer is the most common cancer in women and the most common cause of death in Turkey. In this study; the demographic, clinical and pathological features, and the survival data of approximately 20.000 women with invasive breast cancer between May 2005 and April 17, 2015 were analyzed.

**Material and Methods:** In the National Breast Cancer Database of Turkish Federation of Breast Diseases Societies, 576 parameters under 242 different titles were evaluated.

**Results:** The mean age of the women diagnosed with breast cancer was 51.8 (±12.6), and 16.4% of them were under 40 years old and 37.2% were premenopausal. Histopathologically, 76.9% of them were invasive ductal, 6.5% were invasive lobular, and 8.2% were mixed type breast cancer. Of the patients, 45.4% were histologically grade III and 25.6% were grade III-IV breast cancer. The mean tumor diameter was 25.2 (SD±17,3) mm. Pathological axillary negativity (pN0) rate is 47.2%. Estrogen receptor (ER) was found positive in 72.6% of the patients, progesterone receptor (PR) was found positive in 62.7% and HER-2 receptor was found positive in 21.8%. Modified radical mastectomy was performed in the patients at a rate of 52%, breast conserving surgery (BCS) at a rate of 39% and simple mastectomy at a rate of 8%. Radical mastectomy (43 patients), subcutaneous mastectomy (110 patients) or only axillary dissection (16 patients) are the other operations that were performed. The mean follow-up was 4.3 years and the 5-year survival rate was 86%.

**Conclusion:** In İstanbul Florence Nightingale Breast Center, there were 2124 patients, and 2032 (96.26%) of them were treated with the diagnosis of invasive breast cancer and 122 patients (5.74%) of them with the diagnosis of ductal carcinoma in situ (DCIS). The mean age of patients diagnosed with invasive breast cancer was 51.4±12.98, and their menopause age was 48.98±4.54. Of the patients, 49,6% were premenopausal. The clinical stages at the time of diagnosis were: 68,7% Stage I cancer, 19,5% Stage II cancer, 1,4% Stage III cancer and 9,5% Stage IV cancer. Pathological stages from Stage 0 to Stage IV were 0,7%, 63,6%, 21,7%, 8,6%, and 5,3%. The mean tumor diameter of the patients who were diagnosed with invasive breast cancer was

24,80±16.42 mm, the distance to the surgical margin was 10.39±22.74 mm in those who underwent BCS, the number of SLNB removed was 1.99±2.11, and the number of lymph nodes removed was 14.76±8.32 in those who underwent axillary dissection. The tumor was multifocal in 16.8% of the patients, and multicentric in 1.4. The average number of positive lymph nodes in patients with positive axillary biopsy was 3.07±5.46. Axillary dissection rate was 55.3%. The positivity of ER, PR and HER-2 receptors were 76.9%, 65.8% and 21.8%, respectively.

After the oncoplasty breast surgery was started in the Istanbul Florence Nightingale Breast Center in 2010, the rate of BCS increased from 66% to 75% and the rate of mastectomy decreased from 33% to 25%. In particular, the application of the mini latissimus dorsi flap increased the chances of protecting the breast. In 70-month follow-up of 1,400 patients who underwent BCS, local recurrence was seen in 53 patients and 41.5% of these patients were under 40 years of age. The rate of true recurrence (in the vicinity of the primary tumor cavity) was 62.3%, and the 5-year overall survival rate was 74.7% in these patients. The 5-year survival rate in patients with new primary tumor was 95% (p<0,033).

**Keywords:** Breast cancer, breast cancer in Turkey, The National Breast Cancer Data Base

## OP-070 [Breast Diseases and Surgery]

# The Comparative Analysis of Intraoperative Ultrasonography Performed by the Surgeon in Patients in whom Neoadjuvant Treatment was and was not Performed

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**Objective:** The success criterion in breast conserving surgery (BCS), which is the preferred method for the current treatment of breast cancer, is to provide the intact surgical margin in the first operation with acceptable cosmetic results. Negative surgical margin is one of the most important parameters in prognosis in addition to the fact that it eliminates the need for mastectomy. For this reason, the methods recommended for achieving this aim with the least loss of tissue are attracting great interest. Excision performed through the real-time guidance of intraoperative ultrasonography (IOUS) is an important technique that serves to provide a negative margin in a single-stage surgery. Neoadjuvant chemotherapy (NAC) is a current approach in local advanced breast cancer, and it gives clinicians valuable information related to the biology of tumor; however, it does not provide decrease in the stage of the tumor. The aim of our study was to compare IOUS in terms of intact surgical margins in patients in whom NAC was and was not performed in order to determine the strengths and weaknesses of the technique.

**Material and Methods:** Among the patients who received BCS under the guidance of IOUS between 2014 and 2017; the data of 208 patients in whom NAC was not applied (NAC-) and 194 patients in whom NAC was applied (NAC+) were compared. The confirmation of whether or not there was residual tumor tissue through intraoperative real-time sonographic surgical margin surveillance performed by the surgeon, through sonographic and macroscopic evaluation of each margin of the specimen, and through sonographic analysis of the tumor bed, as well as cavity sampling taken from six separate margins of the tumor bed for permanent evaluation were the standart steps of our methodology. The method was the same regardless of being palpable. No tumors at the surgical margin stained with ink in invasive tumors, and no tumors up to the distance of >2mm from the surgical margin in ductal carcinoma in situ (DCIS) were considered as sufficient in the permanent pathologic analysis.

**Results:** The sensitivity of IOUS in accurately detecting the tumor localization was found to be 100%, independent of NAC uptake. IOUS provided an intact surgical margin in 96.3% of 112 patients with NAC+pathological complete response and in 91.8% of NAC-208 patients. While intact surgical margin was provided with the specimen sonogram at a rate of 98.9% (665/672) in the NAC+group, it was found at a rate of 97.6% (1218/1248) in the NAC-cases. When compared on a case-by-case basis, the positive margin was accurately determined in 71.4% (5/7) of NAC+patients and in 95.4% (16/17) of NAC-patients. While the permanent section results of the two patients in whom specimen sonography could not specify the margin correctly in the NAC+group were reported as invasive lobular carcinoma, DCIS was detected in addition to pure or invasive ductal carcinoma in NAC-patients. Secondary surgery was required in 2.4% of the NAC-patients, but additional surgery was not necessary in the NAC+patients because the cavity samples were negative. None of the groups had mastectomy because of margin positivity.

**Conclusion:** IOUS-guided BCS is a highly effective and useful method independent of neoadjuvant therapy in terms of ensuring intact surgical margin during initial surgery and eliminating the need for reoperation and mastectomy. While cavity sampling is a factor that reduces the need for re-excision especially in NAC+patients in terms of eliminating possible margin positivity; it should be emphasized that DCIS or lobular histology is the most important parameter questioning the diagnostic accuracy of sonography.

**Keywords:** Intraoperative ultrasonography, neoadjuvant chemotetrapy, surgical margin

## OP-071 [Breast Diseases and Surgery]

# The Effect of the Use of Acetylsalicylic Acid on Periprosthetic Capsule and Contracture Developing due to Radiotherapy

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**Objective:** In patients in whom silicone implant is placed after mastectomy, as a result of the postoperative radiotherapy, the silicone implant is contracted due to the effect of capsular fibrosis occurring around. In this study, it was evaluated in an experimental animal model whether or not the development of pericapsular fibrosis and contracture decreased with the use of acetylsalicylic acid.

**Material and Methods:** In the study, 32 Sprague-Dawley female rats weighing 250-300 gr were used. Four groups were formed, each containing 8 rats. A silicone implant was placed in the subcutaneous pocket created in the right thoracodorsal regions of all subjects. They were divided into 4 groups as Group 1: Control group, Group 2: The group receiving radiotherapy after the implant, Group 3: The group receiving radiotherapy and acetylsalicylic acid after the implant and Group 4: The group receiving only acetylsalicylic acid after the implant.

In the subjects of the 2nd and 3rd groups, on the 7th day of the operation, radiotherapy was applied in a single fraction of 2 Gy/min using LINAC with 22 Gy and 6 MV photon energy in such a way that the implant region is covered. In the subjects of the 3rd and 4th groups, acetylsalicylic acid was given once a day for 3 weeks starting from the day following the operation, and its dose was calculated according to an adult human weighing 70 kg and administered in gavage method. All subjects were sacrificed in the 12th week. Implants were removed with the surrounding capsule, examined under light microscope, and fibrosis was assessed.

**Results:** It was observed that in group 1, 1 patient (20.0%) with silicone implant had normal minimal findings; 1 patient (20.0%) had mild fibrosis and accompanying mild chronic inflammatory cell infiltration, and 3 patients (60.0%) had significant fibrosis and associated chronic inflammatory cell infiltration (lymphocyte, the presence of histiocyte); in group 2, 6 (100%) of the patients who had silicone+radiotherapy had significant fibrosis and associated chronic inflammatory cell infiltration (lymphocyte, the presence of histiocyte); in group 3, 5 patients (71.4%) who had silicone+radiotherapy+acetylsalicylic acid had mild fibrosis and associated mild chronic inflammatory cell infiltration, and 2 (28.5%) patients had significant fibrosis and associated chronic inflammatory cell infiltration (lymphocyte, the presence of histiocyte); in group 4, 3 (42.9%) patients who had silicone+acetylsalicylic acid had mild fibrosis and concomitant mild chronic inflammatory cell infiltration, and 4 (57.1%) patients had significant fibrosis and associated chronic inflammatory cell infiltration (lymphocyte, the presence of histiocyte).

It was found that acetylsalicylic acid could decrease periprosthetic capsule fibrosis secondary to radiotherapy in histopathological findings, but statistical significance level was not obtained ( $p > 0,05$ ).

**Conclusion:** In the treatment of breast cancer, silicon implants have a major importance in early reconstruction. The most important factor preventing the use is the capsule contracture developing due to the adjuvant radiotherapy. Although the use of acetylsalicylic acid has been shown to reduce periprosthetic fibrosis histopathologically, it has not reached statistical significance.

**Keywords:** Breast cancer, radiotherapy, silicone implant, acetylsalicylic acid, capsule contraction

## OP-072 [Breast Diseases and Surgery]

# Radioguided Surgical Excision in Non-Palpable Intraductal Pathologies

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**Objective:** It is very difficult to surgically remove non-palpable intraductal pathologies effectively. Excision with Radioguided Occult Lesion Localization (ROLL) technique is a method used for non-palpable breast tumors. However, it has not been evalu-

ated in the literature whether this technique is applicable for intraductal pathologies. In this study, the applicability, effectiveness, and re-operation rates of the ROLL technique for non-palpable intraductal pathologies were evaluated.

**Material and Methods:** A total of 67 patients, 65 females and 2 males, who received surgical indications for non-palpable intraductal pathologies at Mersin University General Surgery Clinic between 2009 and 2018 were included in the study. Nanocolloid agent was administered near or into the lesion with ultrasound guidance in the patients in the morning of the operation. The lesion was localized with a Gamma probe and surgical excision was performed. The pathology results, surgical margin, postoperative complications and re-surgery rates of the patients were recorded.

**Results:** Sixty-six of the targeted lesions were localized and removed. Because the nanocolloid substance spread to the whole breast, the lesion could not be localized only in one case. The pathology was reported as ductal carcinoma in situ (n=9), invasive ductal carcinoma (n=4), atypical ductal hyperplasia (n=3), atypical lobular hyperplasia (n=1), sclerosing adenosis (n=15), radial scar (n=3), periductal mastitis (n=3), usual ductal hyperplasia (n=3), florid-type hyperplasia (n=16), fibrocystic change (n=11), apocrine metaplasia (n=17) and fibroadenoma (n=7), some of which were found in the same patient at the same time. The mean size of the resected surgical piece was 14 (8-48) mm. While surgical margin was detected positive in a patient with ductal carcinoma in situ, it was found to be close in a patient with invasive carcinoma. Re-operation was performed only in a patient in whom the lesion could not be localized and the surgical margin was positive. A total of 3 patients were found to have splitting at the wound site, and no other wound problems or complications were encountered.

**Conclusion:** In this study, it has been shown that ROLL is an easy and convenient technique for non-palpable intraductal pathologies with surgical indications, thanks to high localization rates, providing suitable rates of clean surgical margins and low re-operation requirement.

**Keywords:** Radioguided surgery, intraductal pathologies, nonpalpable breast lesions

## OP-074 [Endocrine Surgery]

# The Evaluation of Parathyroid Perfusion in Thyroid Surgery Using Fluorescent Angiography

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**Objective:** The most important complications of thyroidectomy are recurrent nerve injury and hypoparathyroidism. Although hypoparathyroidism is often temporary, it brings a heavy burden to both patients and the health system when permanent. The aim of our study is to measure the blood supply to parathyroids with Indocyanine Green (ICG) and to investigate its usefulness in the evaluation of perfusion.

**Material and Methods:** The patients scheduled for total thyroidectomy were included in the study. After thyroidectomy was completed; localizations of parathyroid tissues were determined with the naked eye and parathyroids were visually scored according to their viability. After indocyanine green was administered intravenously, the parathyroid tissues were imaged with Near-infrared fluorescence-imaging device, and the perfusion scores were determined by measuring the amount of radiation on the parathyroid. These scores and the postoperative biochemical results of the patients were evaluated.

**Results:** Postoperative hypoparathyroidism developed in a total of 3 (15%) patients. They all improved in 3 months. When the data of patients with and without hypoparathyroidism were compared, the mean and highest Spy Parathyroid Viability Score (sPVS) values were lower in the group with hypoparathyroidism. However, no statistically significant difference was found. There was a statistically significant difference between the total and lowest sPVS values. Eleven autotransplantations were performed in 9 patients according to the visual score. The minimum sPVS value of autotransplanted parathyroids was measured as 30 and the maximum sPVS was measured as 70.

**Conclusion:** We believe that an objective criterion for parathyroid autotransplantation can be developed with the use of Spy angiography. We think that permanent hypoparathyroidism can be minimized by determining an objective cut-off value for taking autotransplantation decision with wider case series and multicentre studies.

**Keywords:** Hypoparathyroidism, spy fluorescence angiography, thyroidectomy

## OP-075 [Endocrine Surgery]

## The Factors Affecting the Malignancy Risk of Fine Needle Aspiration Biopsy Performed in Thyroid Nodules of the Patients with Atypia of Undetermined Significance

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**Objective:** The Bethesda classification is widely used in the evaluation of fine needle aspiration biopsy results in patients with thyroid nodules. There are 6 groups in this classification. Atypia of undetermined significance/follicular lesions of undetermined significance are in group 3 and can not be categorized as benign or malignant. Atypia of undetermined significance and follicular lesion of undetermined significance are in the same group but have different malignancy risks. The aim of our study is to investigate the factors affecting the malignancy in patients with atypia of undetermined significance in reference to the fine needle aspiration biopsy of the thyroid nodule.

**Material and Methods:** The patients with atypia of undetermined significance according to the fine needle aspiration biopsy of the thyroid nodule performed between June 2013 and November 2016 in the General Surgery-Breast Endocrine Surgery Clinic in Ankara Numune Training and Research Hospital were included in the study. The demographic, clinicopathologic and ultrasonographic findings of 165 patients were analyzed.

**Results:** Total thyroidectomy surgery was performed in all patients. The pathology was reported to be malignant in 48 patients (49.1%). The most common malignant lesion was papillary thyroid cancer. The presence of calcification in the nodule ( $p=0,032$ ) in the ultrasonography after univariate analysis, the presence of poorly-circumscribed nodule ( $p: 0,038$ ), and the presence of nuclear inclusion body in fine needle aspiration biopsy were found to be statistically significantly associated with malignancy. In multivariate analysis, the presence of nuclear inclusion body in the fine needle aspiration biopsy was found as an independent variable increasing the risk of malignancy (odds ratio: 3.394).

**Conclusion:** The risk of malignancy in the presence of nuclear inclusion body in the cytologic examination and the presence of calcification and poorly-circumscribed appearance in the ultrasound is significantly increased in patients with atypia of undetermined significance according to the fine needle aspiration biopsy of the thyroid nodule. In these patients, surgery should be given particular importance.

**Keywords:** Thyroid, nodule, atypia of undetermined significance

## OP-076 [Endocrine Surgery]

## TERT Mutation is a Candidate Predictive Marker to Determine Recurrence in Papillary Thyroid Cancers

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**Objective:** Papillary thyroid carcinoma (PTC) is the most common well-differentiated thyroid tumor, accounting for approximately 80% of thyroid cancers, and its incidence is increasing around the world. Today, the majority of patients with PTC have good prognosis with the development of standard therapies; however, systemic or local recurrence develops in approximately 10-15% of patients. There is no known marker used in routine practice that can predict this recurrence that may occur in patients after treatment. In the present study, it was aimed to determine tumor subtypes by examining NRAS, KRAS, BRAF, TERT mutations in PTC patients in the Turkish population and to make intergroup comparison by examining the prognosis of patients in each subtype. Thus, it is aimed to determine the markers that can provide guidance for the risk and can be used clinically in patients in whom recurrence has not yet developed.

**Material and Methods:** The study was performed on the resection materials of 34 patients who were treated at our center due to PTC. Ethics committee approval was received for the study. NRAS, KRAS, BRAF, TERT mutations were determined from paraffin embedded tissues using automated DNA sequencing method. The prognosis and genetic data of the patients were analyzed using SPSS, Graphpad and Wizard statistical programs.

**Results:** Recurrence was detected in 6 (17%) of 34 patients who were followed up at least three years. BRAF V600E mutation was found in 14 of the patients, TERT-124 mutation (C228T) in 8, KRAS codon 12 mutation in 6, and NRAS codon 12 mutation in

1 patient. While both TERT and BRAF mutations were observed in 4 patients, no mutation was detected in 1 patient. Five of the patients in whom local/systemic recurrence was observed had TERT mutation and one of them had KRAS mutation. A statistically significant relationship was found between recurrence and TERT mutation ( $p=0.026$ ).

**Conclusion:** The incidence of TERT promoter region mutations in PTC tumors varies, and this ratio is between 7.5% and 25%. In the current study we performed in the Turkish population, this rate has been determined as 35% and found to be correlated with recurrence. Various clinopathologic risk factors such as age, gender, cervical lymph node metastasis, tumor diameter and extrathyroidal invasion are used in the prediction of PTC prognosis. However, these factors are not always sufficient to predict the likelihood of recurrence. Determining the factors that can be used to determine the prognosis of patients will guide the establishment of effective treatment protocols. Although our data are preliminary study results, they support the availability of TERT promoter region mutations to predict recurrence.

**Keywords:** Papillary thyroid cancer, prognosis, TERT, BRAF, KRAS, NRAS

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## OP-077 [Endocrine Surgery]

# The Effect of Surgical Treatment on Swallowing Related Quality of Life in Primary Hyperparathyroidism (Early results)

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**Objective:** Primary hyperparathyroidism is a condition in which one or more parathyroid glands gain autonomy, resulting in abnormally elevated levels of blood calcium, which leads to pathologies in different organ systems. The treatment of parathyroid adenomas is surgical removal of adenomas. There are studies in the literature showing that adenoma excision improves the quality of life. The aim of this study is to evaluate how quality of life and swallow-related quality of life are affected in patients with parathyroidectomy.

**Material and Methods:** The study was carried out at Uşak University Training and Research Hospital. The patients with primary hyperparathyroidism and scheduled to undergo surgery for single parathyroid adenoma were included in the study. Surveys were conducted to evaluate quality of life (SF-36) and swallow-related quality of life (SWAL-QoL) before and 1 month after the surgery. The data were analyzed using the IBM SPSS statistical program. After different subgroup scores of the scales were calculated, the preoperative and postoperative values were evaluated using the T test. The P value was accepted as 0.05.

**Results:** The patients with 24 parathyroid adenomas were included in the study until January 2018. Of the patients, 75% were female and the mean age was found as  $52,4\pm 12,3$ . While the preoperative calcium levels of the patients were found to be  $11,4\pm 0,5$  mg/dl, this ratio decreased to  $8,6\pm 0,4$  mg/dl after the operation. While the mean parathormone values were  $295\pm 356$  pg/ml before surgery, they were found to be  $35,5\pm 18,1$  pg/ml after surgery. SF-A significant increase was observed after surgery in 5 of the 8 subgroups of the SF-36 scale. Likewise, a significant improvement was observed in 4 of 10 subgroups of the SWAL-QoL scale.

**Conclusion:** In patients undergoing surgery for parathyroid adenomas, both quality of life and swallowing related quality of life increase significantly after surgery.

**Keywords:** Primary hyperparathyroidism, quality of life, minimally invasive surgery

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## OP-078 [Endocrine Surgery]

# The Determination of the Risk Factors Affecting the Development of Postoperative Hypocalcemia in Patients Undergoing Thyroid Surgery

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**Objective:** The aim of this study was to evaluate the effects of demographic characteristics of the patients undergoing thyroid surgery, thyroid gland pathologies and surgical procedures on the development of postoperative hypocalcemia complications.

**Material and Methods:** A total of 818 adult patients who had undergone thyroid surgery in the Erciyes University Medical Faculty Hospital between January 2010 and December 2016 were included in the study. Hospital automation system and patient

files were reviewed retrospectively and the data were recorded. Findings such as demographic characteristics, preoperative USG, scintigraphy and tomography imaging methods, preoperative laboratory values, preoperative diagnoses, cervical lymph node dissection (LND), postoperative pathology diagnoses, specimen weight, surgery that was performed, and the development of postoperative hypocalcemia were recorded.

**Results:** The number of patients in whom hypocalcemia developed was 232 (28.4%). The rate of temporary hypocalcemia was 26.7% (n=218) and the rate of permanent hypocalcemia was 1.7% (n=14). In univariate analyses; female gender ( $p<0,001$ ), thyroid tissue weighing more than 100 gr ( $p=0.026$ ), malignancy of thyroid disease ( $p=0.006$ ), the fact that total thyroidectomy had been performed ( $p=0.025$ ), the presence of thyroid tissue with cervicomedastinum location ( $p=0.002$ ) and the fact that cervical LND had been performed ( $p<0.001$ ) were found to be significant among the factors affecting the development of postoperative hypocalcemia. In multivariate analyses; female gender ( $p=0,002$ ), thyroid gland weighing 100gr ( $p=0,047$ ), thyroid tissue with cervicomedastinum location ( $p=0,003$ ) and the fact that LND had been performed ( $p<0,001$ ) were found to be the risk factors for the development of postoperative hypocalcemia. The hospitalization period ( $m=2$  days) of the patients with postoperative hypocalcemia was found to be higher than the control group ( $m=1$  day) ( $p<0.001$ ).

Female gender, heavy thyroid tissue, retrosternal goitre and the fact that cervical LND had been performed were found to be significant in multivariate analyses as risk factors for hypocalcemia after thyroidectomy. While hyperthyroidism, advanced age, and re-operation status were found to be predisposing factors to hypocalcemia in current studies, these conditions increased the risk of hypocalcemia in our study, but they were found not to be statistically significant. Similar to the current studies, the duration of hospitalization in patients with hypocalcemia was found to be significantly high.

**Conclusion:** Female gender, thyroid tissue weighing more than 100 gr, retrosternal location, and the fact that cervical LND had been performed were found to be risk factors in the development of postoperative hypocalcemia, and cervical LND was evaluated as the most risky factor. These factors and the effects that they create can be determined by an effective evaluation before surgery and necessary precautions can be taken to reduce the patients' hypocalcemia findings. In this way, patient comfort is increased and the duration of hospitalization is reduced. A more prospective study with sufficient number of patients could lead to more robust studies evaluating the factors that may lead to hypocalcemia.

**Keywords:** Weight, gender, dissection, hypocalcemia, thyroidectomy, retrosternal

## OP-079 [Endocrine Surgery]

# Is Total Thyroidectomy More Difficult in Hashimoto Thyroiditis?

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**Objective:** Although Hashimoto thyroiditis is accepted as a difficult thyroidectomy for surgeons, there is not enough data in the literature to support it. We aimed to objectively examine the effect of Hashimoto thyroiditis on the duration to reach the recurrent laryngeal nerve (RLN), the duration of thyroidectomy and RLN injury in patients undergoing total thyroidectomy, and to evaluate whether or not it can be classified as difficult thyroidectomy.

**Material and Methods:** The patients in whom total thyroidectomy was performed by the same surgeon and routine RLN dissection was performed through nerve monitorization in Mersin University General Surgery Department between January 2008 and January 2018 were included in the study. The durations to reach the nerve during the operation and the durations of surgery were prospectively recorded. According to their pathology, the patients were divided into two groups as hashimoto thyroiditis and other benign diseases. The malignant patients considered to be difficult thyroidectomy, Graves patients, recurrent patients, and complementary thyroidectomies were not included in the study. Group 1 was composed of 132 patients whose pathologic result was reported as hashimoto thyroiditis, and group 2 was composed of 212 patients whose pathology result was reported as benign diseases other than Hashimoto. The patients were statistically examined in terms of age, gender, RLN identification rates, duration to reach RLN, duration of operation, temporary or permanent RLN injury, and other postoperative complications (temporary or permanent hypoparathyroidism).

**Results:** While no difference was found between the groups in terms of RLN identification rates ( $p>0.05$ ), there was a statistically significant difference in terms of age, gender, the duration to reach RLN and the duration of operation ( $p=0.01$ ,  $p=0.007$ ,  $p<0.001$  and  $p<0.001$ , respectively) (0001). While the mean age of the patients in group 1 was  $46.6\pm 11.5$ , the mean age of the patients in group 2 was  $50.1\pm 12.6$ . The female gender ratio was 89.3% in group 1 and 81.9% in group 2. The duration of operation and the duration to reach RLN were found to have significantly longer in patients with Hashimoto thyroiditis. While the rate of temporary RLN injury in the group with Hashimoto thyroiditis was numerically higher, no statistically significant difference was found. It was determined that the operation lasted significantly longer in patients with temporary RLN injury in both groups ( $p=0.002$ ). No per-

manent nerve damage was seen in any of the patients in both groups. There was no statistically significant difference between the groups in terms of postoperative complication ( $p > 0.05$ ).

**Conclusion:** It was found that the duration of operation and the duration to reach RLN was significantly longer in patients with Hashimoto's thyroiditis than in patients with other benign pathology. It has been scientifically shown that hashimoto thyroiditis is among the causes of difficult thyroidectomy.

**Keywords:** Hashimoto, recurrent laryngeal nerve, difficult thyroidectomy

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## OP-080 [Emergency Surgery and Trauma]

# Our Experience of Non-surgical Treatment in Peptic Ulcer Perforation

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**Objective:** Peptic ulcer perforation is a complication seen in stomach ulcers at a rate of 2-10%. The widely accepted method in its treatment is surgery. Conservative treatment options are also recommended in a few selected publications in the literature. In this study, we aimed to present our experience of non-operative treatment in peptic ulcer perforation.

**Material and Methods:** The patients who were admitted to our clinic with the diagnosis of peptic ulcer and treated between January 2012 and September 2017 were reviewed retrospectively through the hospital automation system. In addition to sudden onset abdominal pain, the diagnosis of peptic ulcer perforation was made through direct standing abdominal x-ray image and when intraperitoneal free air was seen in abdominal tomography.

**Results:** Between these dates, 41 patients were hospitalized and treated with the diagnosis of peptic ulcer perforation. While thirty-five patients (85%) were treated with laparoscopic or open surgery, non-surgical treatment was preferred in 6 patients (15%). Five of the patients treated without surgery were male and one was female. Their ages ranged from 18 to 85. While the ASA score was 1 in four patients, it was ASA-2 in one patient, and ASA-3 in another patient. In the physical examination, all of the patients had tenderness and defense in epigastrium. The vital parameters were normal. None of them had widespread peritonitis findings. There was free air below the diaphragm in the standing abdominal x-ray in all patients. Intravenous contrast-enhanced abdominal tomography was performed in all of the patients followed up with conservative method. In addition to intraperitoneal free air in the tomography in all patients, there was subhepatic fluid in three patients. Oral food intake was stopped in all patients; intravenous fluid, antibiotherapy with ceftriaxone and metronidazole and intravenous proton pump inhibitor were initiated. Median duration of hospitalization was 4 days (3-5 days). All of the patients were discharged without any additional intervention.

**Conclusion:** In addition to clinical findings, non-surgical treatment should be considered as an option in a selected group of patients who are diagnosed with peptic ulcer perforation with intraperitoneal free air, who has normal vital parameters and does not have common peritonitis findings in abdominal examination. Thus, it will be possible to avoid unnecessary surgery and reduce the possible morbidity and mortality associated with the operation. There are publications in the literature about conservative follow-up in peptic ulcer perforation. In our practice, unlike the non-surgical method described in the literature, the nasogastric tube is not inserted in the patient, which improves patient comfort.

**Keywords:** Peptic ulcer, perforation, conservative follow-up

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## OP-081 [Emergency Surgery and Trauma]

# Case Report: Gastric Volvulus, a Rare Cause of Ileus

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**Introduction:** Gastric volvulus is referred to the clinical picture in which the stomach rotates more than 180 degrees on one or more axes. It can be acute or chronic. If acute gastric volvulus is not diagnosed and treated early, complications such as gastric ischemia, necrosis and perforation may occur and the mortality rate is between 30% and 50%. Borchardt triad, which is the classic clinic, is seen in 70% of patients. This triad is characterized by severe epigastric pain, distention, vomiting with gag and inability to attach the nasogastric tube. Early diagnosis and treatment before the complications develop lead to symptom regression and better prognosis. In this case, we aimed to present the patient with acute gastric volvulus who was admitted to the emergency service due to abdominal pain in the epigastric region.



**Case:** A 63-year-old woman was admitted to the emergency department of a state hospital due to an increase in the complaints of abdominal swelling, nausea and vomiting. The patient was referred to our clinic with the prediagnosis of hiatal hernia and the translocation of proximal stomach to mediastinum, which were detected in tomography. The patient was conscious, blood pressure was 125/80mmHg, pulse was 95, and oxygen saturation was 92%. While the leukocyte was detected as 15K/uL in blood tests, no abnormality was observed in any of the biochemical parameters. There was advanced distension in the abdomen but there were no findings of defense or rebound. Nasogastric tube could not be inserted in the patient. When the tomography taken at an external center was examined, it was observed that the patient had hiatal hernia and gastric volvulus, and the stomach was severely dilated, but no signs of perforation were observed. The patient was taken to operation urgently. After laparotomy, dilated and distended stomach extending from xiphoid region to umbilicus inferior was observed in the patient. After sufficient image area was provided, it was observed that the patient had mezo-axial gastric volvulus and the fundus herniated into mediastinum through hiatus. Reduction was made and hernia was pulled into the abdomen. A nasogastric tube was then inserted in the patient by the anesthesia team and the stomach contents were aspirated to reduce distention. Observation revealed necrotic areas in the posterior fundus of stomach tissue. After adequate dissection, esophagus was suspended; the crural and hiatal region was revealed. Hiatal opening was primarily closed. The necrotic stomach area was removed in the form of wedge resection with linear staples. In order to prevent the formation of volvulus again, after the gastropexy procedure, drains were placed and the abdomen was closed. No problems were encountered in postoperative follow-ups. On the third postoperative day, oral feeding was started in the patient. The patient was discharged on the fifth postoperative day without any problems.

**Conclusion:** Gastric volvulus is a rare condition usually seen in elderly patients. The stomach is normally an organ anchored by the gastrophrenic ligament, the gastrosplenic ligament, the gastrocolic ligament and the gastrohepatic ligament. Volvulus can be caused by the primary loosening or atrophy of the ligaments at a rate of 30%. It can secondarily be caused by diaphragm evantration, paraesophageal hernia, and stomach cancer at a rate of 70%. Ischemic necrosis is a complication seen in 11% of acute gastric volvulus and responsible for 30% of mortalities. Operations such as gastric wedge resection, sleeve gastrectomy, subtotal gastrectomy or total gastrectomy may be required depending on the localization and prevalence of necrosis.

**Keywords:** Gastric volvulus, gastropexy, volvulus, hiatal hernia

## OP-082 [Emergency Surgery and Trauma]

# Comparison of the Neutrophil-Lymphocyte Ratio with the Ranson Criteria for Determining the Severity of Acute Biliary Pancreatitis

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**Objective:** Acute pancreatitis is an inflammatory disease with various clinical features ranging from mild to severe fatal cases with only temporary abdominal symptoms. The decreased number of lymphocytes along with increased neutrophil count is associated with severe sepsis, bacteremia and surgical stress. Neutrophil-lymphocyte ratio (NLR), which is calculated by the ratio of these two different components of white blood cells, is used to evaluate the surgical and inflammation states. The aim of this study was to investigate whether there was a relationship between the severity of acute biliary pancreatitis and this marker.

**Material and Methods:** Data of 321 patients hospitalized due to the diagnosis of acute biliary pancreatitis in İstanbul Medical Faculty between January 1, 2012 and December 30, 2017 were evaluated retrospectively. Written and electronic medical records were reviewed using diagnostic searches with the terms "acute biliary pancreatitis" in the hospital database. Acute biliary pancreatitis was diagnosed clinically, laboratory and radiologically. The Ranson's criteria were used to determine the severity of pancreatitis. NLR value of the patients was calculated and compared with the the Ranson's criteria. The patients' ages, complete blood counts, glucose, aspartate aminotransferase (AST), alanine aminotransferase (ALT), and lactate dehydrogenase (LDH) values were evaluated retrospectively. Non-biliary pancreatitis was excluded from the study.

**Results:** The mean age of the patients was  $53.1 \pm 16.7$  years, and 124 (38.6%) patients were male and 197 (61.4%) were female. The number of mild and severe pancreatitis cases was 296 (92.3%) and 25 (7.7%), respectively. Early cholecystectomy was performed in 242 patients who had mild pancreatitis (75.3%) (In the same hospitalization). The remaining 79 (24,6%) mild pancreatitis cases were not performed cholecystectomy at the first hospitalization because of patient preference and other reasons. Necrotizing pancreatitis developed in 12 (3.7%) patients. 18 (5.6%) patients were hospitalized in the intensive care unit. The mean length of hospitalization was  $10.06 \pm 11.13$  days. The relation between Ranson severity and NLR value was evaluated with the Spearman correlation and it was statistically found to be controversial ( $P=0.023$ ,  $R^2=0.142$ ).

**Conclusion:** Uncertainty of biochemical parameters and scoring systems that can be used alone at the initial admission of the patients who were hospitalized for abdominal pain and diagnosed as acute pancreatitis is an important clinical problem. NLR can be used as an early marker of AP and it may play a role in predicting the severity of the disease.

**Keywords:** Acute biliary pancreatitis, neutrophil-lymphocyte ratio, ranson's criteria

## OP-083 [Emergency Surgery and Trauma]

# A New Predictive Parameter in the Prediction of Mortality in Peptic Ulcer Perforation; Neutrophil/Lymphocyte Ratio (NLR) and Platelet/Lymphocyte Ratio (PLR)

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**Objective:** Peptic ulcer is the loss of submucosa caused by the harmful effect of acid and pepsin in the stomach and duodenum mucosa and the loss of focal tissue extending deeper. Peptic ulcer perforation (PUP) is the second most common complication after bleeding. However, the necessity of perforation-related surgery is higher than hemorrhage. In the literature, mortality due to perforation is reported between 4% and 30%. A number of scoring systems such as Boey and Peptic Ulcer Perforation Score (PULP) have been developed for predicting mortality in PUP. Recently, a scoring system based on inflammation markers such as Red cell distribution width (RDW), Neutrophil/Lymphocyte ratio (NLR) and Platelet/Lymphocyte ratio (PLR) has been proposed to predict the prognosis. The aim of this study is to demonstrate the mortality relationship between the Neutrophil/Lymphocyte ratio (NLR) and the Platelet/Lymphocyte ratio (PLR) in patients who were admitted due to peptic ulcer perforation.

**Material and Methods:** The laboratory parameters including demographic information, clinical features, neutrophil, lymphocyte and platelet values of 166 patients who were operated due to PUP in Ankara Numune Training and Research Hospital Emergency Surgery Service between 2010 and 2015 were recorded retrospectively.

**Results:** The median age of the patients was 45 years (age range 15-89) and the female/male ratio was 0.22 (31/135). The mean duration of hospitalization was 8 ( $\pm 9.46$ ) days and ranged from 1 to 92 days. Twenty-one of the patients (12.7%) lost their lives. The 'Receiver operating characteristic (ROC) curves' analysis was performed to determine the mortality estimates with neutrophil/lymphocyte ratio (NLR) and platelet/lymphocyte ratio (PLR). As a result of the analysis, the area under the curve (AUC) was seen as a strong prognostic factor in mortality prediction with the values of 0,681 (95% Confidence interval 0.569-0.794,  $p=0.009$ ) and 0,779 (95% confidence interval 0.692-0.866,  $p<0,001$ ), respectively. Mortality is high in patients with high NLR and PNR values.

**Conclusion:** In our study, high NLR and PNR values at the time of admission of PUP patients were observed to be a marker of mortality. Prospective studies with a large number of patients should be planned to clarify the role of NLR and PNR on these patients.

**Keywords:** Mortality, peptic ulcer perforation, neutrophil/lymphocyte ratio (NLR), platelet/lymphocyte ratio (PLR)

## OP-084 [Emergency Surgery and Trauma]

# The Factors Affecting Mortality in Fournier's Gangrene: Retrospective Evaluation of Thirty Cases

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**Objective:** The aim of this study is to investigate the factors affecting the mortality in Fournier's gangrene (FG) and in order to improve survival in a positive way, it is aimed to improve treatment principles by paying attention to the factors considered to be effective in mortality.

**Material and Methods:** The files of 30 patients who were treated due to FG between February 2012 and September 2017 in the General Surgery Clinic of Okmeydanı Training and Research Hospital were retrospectively reviewed. The patients were divided as those who died (Group 1: 8 patients) and those who survived (Group 2: 22 patients). The patients in the two groups were compared in terms of gender, age, extent of infection, the scores of Uludađ Fournier's Gangrene Severity Index (UFGSI) and Fournier's Gangrene Severity Index (FGSI), serum urea level, infection source, the presence of diabetes and obesity, other accompanying diseases, the presence of stoma for diversion, Vacuum Assisted Closure (VAC), duration of hospitalization, duration of intensive care (DIC), and isolated bacterial species. The results were evaluated with Mann-Whitney U, chi-square, ROC test and regression analysis using the SPSS version 15.0.  $p\leq 0,05$  was considered significant.

**Results:** The mortality rate was 26.6%. Our study included 16 men and 14 women. There was no significant difference between the groups in terms of gender. The mean age was  $58.7 \pm 11.5$  years. In terms of age, one of the UFGSI parameters, the mean age of the patients in Group 1 ( $68.5 \pm 12.08$ ) was significantly greater than the mean of Group 2 ( $55.13 \pm 9.17$ ) ( $p=0.035$ ). The extent-of-infection scores, one of the UFGSI parameters, were significantly higher in Group 1 ( $p=0.036$ ). UFGSI and FGSI scores were significantly higher in Group 1 than in Group 2 ( $p=0.024$  and  $p=0.034$ , respectively). Of the UFGSI and FGSI parameters, body temperature, heart rate, respiration rate, serum potassium and hematocrit values were significantly higher in Group 1 than in Group 2 ( $p<0.05$ ). UFGSI and FGSI scoring systems had a 87.5% sensitivity for predicting mortality and 98% and 99% specificity, respectively. The threshold values for UFGSI and FGSI scores were 10 and 7, respectively. There were 7 diabetic patients in group 1 and 21 in group 2, and there was no significant difference. Three of the diabetic patients in Group 1 and eight of them in Group 2 were obese, and no significant difference was found in terms of obesity. Other than diabetes and obesity, all the patients in Group 1 and 12 patients in Group 2 had other comorbid diseases, and there was a significant difference ( $p=0.02$ ). DIC was significantly longer in Group 1 ( $p=0.001$ ).

**Conclusion:** Although the treatment management of FG has been well described, there are issues that need to be clarified regarding mortality. We think that the age over 60 years and the extent of infection exceeding the pelvis are important parameters for predicting mortality. Patients with a UFGSI score lower than 10 have a higher likelihood of survival and intensive care is seldom needed for them. Patients with a UFGSI score greater than 10 have a higher likelihood of mortality. These patients should be treated in an intensive care unit by an experienced team of general surgery, plastic surgery and intensive care specialists.

**Keywords:** Fournier's gangrene, mortality, severity index

## OP-085 [Emergency Surgery and Trauma]

# The Comparison of Clinical Scoring and Radiological Findings in Patients with Acute Appendicitis

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**Objective:** Acute appendicitis is one of the conditions that require immediate surgical intervention. In most cases, the diagnosis is easily made through anamnesis, physical examination, and laboratory tests. However, the reported negative appendectomy rates range from 6% to 40%. Many scoring systems (SS) have been developed to reduce negative appendectomy rates. Scoring systems are based on anamnesis, and physical and routine examinations, and its application is simple. Despite these methods, clinical picture remains atypical in some cases, and radiological evaluation is needed. Scoring systems and radiological examination when needed reduce the rates of negative appendectomy. The aim of this study is to measure the sensitivity, specificity, and diagnostic values of Alvarado, Fenyö-Lindberg, RIPASA, Eskelinen, and Ohmann scoring systems, and to compare these methods with radiological findings.

**Material and Methods:** In this retrospective research; a total of 112 patients, 67 men (59.8%) and 45 women (40.2%), who were operated with the diagnosis of acute appendicitis in the General Surgery Clinic of Ankara TRH, who had all the parameters of the scoring methods used in our research in their file records, who had the results of radiological (CT or USG) examination, and who were aged between 18-88 years (mean 33.3) were included in the study. When the pathology results were examined, negative appendectomy was found in 12 patients (10.7%). The sensitivity, specificity, negative and positive predictive values (PPV, NPV) of the SS were investigated by ROC analysis. The cut-off value in the methods was calculated by the Youden index. The best values according to the statistical results were obtained in the Fenyö-Lindberg scoring system, and the cut-off value was found as  $>2$ , the sensitivity as 65%, the specificity as 83.33%, and the area under curve (AUC) was found as 0.767. The statistical results of the other SSs are given. No statistically significant superiority was found in any of the SSs to another. ROC curves were also generated as a separate parameter for the number of leukocytes and the diameter of the appendix. At the cut-off value  $>13.4 \times 10^9/\mu\text{L}$ ; the sensitivity of leukocyte count was calculated as 59%, specificity as 91.67%, and AUC as 0.751. It was shown that the leukocyte count greater than 13.4 as a single parameter increased the probability of appendicitis. The appendiceal diameter was measured with USG in 71 patients and with CT in 41 patients. The mean appendiceal diameter was 9.6 mm (6-18 mm). At the cut-off value  $>7$  mm; the sensitivity of appendiceal diameter was found as 83%, specificity as 41.67%, and AUC as 0.559. Although the appendix with a diameter over 7 mm shows the possibility of appendicitis, it was seen not to be a statistically good diagnostic parameter alone.

**Results:** In our study, it was found that the SSs used in the diagnosis of appendicitis were not statistically superior to each other. It was seen that radiologically measured diameter of the appendix did not have any value alone, the SSs were seen not to be superior to each other. All SSs used in our study can be used as a diagnostic tool with high sensitivity and specificity above a certain cut-off value, and additional radiological examinations are not needed when applied correctly.

**Conclusion:** There are many scoring systems used to diagnose acute appendicitis. Although the accuracy of Ss is discussed in the published researches, most researches argue that it has a high diagnostic value. In our study, it has been shown that Alvarado, Fenyö-Lindberg, RIPASA, Eskelinen, Ohmann scoring systems can be applied in the diagnosis of appendicitis with a high success rate.

**Keywords:** Acute appendicitis, scoring systems, diagnosis

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## OP-086 [Colon and Rectum Surgery]

# The Results of Treatment in Rectal Cancer Patients in whom Neoadjuvant Chemoradiotherapy was Applied

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**Objective:** The aim of this study is to evaluate the treatment outcomes and the prognostic factors affecting the outcomes in rectum cancer patients treated with neoadjuvant chemoradiotherapy (CRT).

**Material and Methods:** One hundred and fifty-seven rectal cancer patients receiving neoadjuvant CRT between February 2010 and January 2016 were included in the study. 5-fluorouracil-based chemotherapy (CT) and fractionated RT+adjuvant CT were performed simultaneously in patients with locally advanced rectal cancer. CT/MR imaging was performed for pre-CRT screening in all cases, and staging was performed. Statistical analyses were performed using Kaplan-Meier and Log rank/Cox regression tests.

**Results:** The median age was 64 (25-90) and 66% of the patients were male. The median follow-up duration was 31.7 (4-148) months. T and N stages of the patients were T2: 11 (7%), T3: 32 (20%), T4: 114 (73%) and N0: 50 (32%), N+: 107 (68%), respectively. While the tumor was located in the distal rectum in 56 (36%) patients, it was located in the middle rectum in 69 (44%) and in the proximal rectum in 32 (20%) patients. In 41 (26%) patients, 45-50.4 Gy neoadjuvant RT was performed in 3-dimensional conformal RT technique and 50 Gy neoadjuvant RT was performed in 116 (74%) patients with intensity adjusted RT technique. Oral capecitabine with RT was given in 131 (83%) patients, and 21 patients were treated with flouresil-based iv CT. CT could not be administered only in 5 patients. Median 8 weeks (1-27) after radiotherapy; sphincter preservation was applied to 73 (47%) of the patients and abdominoperineal resection was applied to 31 (20%). Fifty-three patients could not be operated because they did not want or because of medical reasons. After CRT, sphincter-preserving surgery could be applied to 25% of the patients who were not suitable for sphincter-preserving surgery and 26% of them were followed up without surgery. Postoperative pathologic T and N stage distributions were T0; 5 (14.3%), T1; 2 (3.9%), T2; 27 (25.5%), T3; 25 (42.6%), T4; 38 (13.4%) and N0; 78 (66.9%); N1; 13 (24.9%) and N2; 13 (7.8%), respectively. The 1, 3 and 5-year overall survival rates were 92%, 76% and 63%, respectively; pelvic-recurrence free survival was found to be 99%, 96%, 90% and distant recurrence-free survival was 96%, 90%, 60%, respectively. Distant recurrence was found in pelvic in seven patients (4%) in median 8.6 (5-66.8) months and in 22 (14%) patients in median 10.9 (2-66.8) months. No pathological response in the statistical analysis, pT3-4, N positivity at the time of diagnosis, the presence of lymphovascular invasion and RT (conformal RT) technique were found to be negative prognostic factors for OS; 44 (28%) patients had diarrhea, 21 (13%) patients had cystitis and 97 (60%) patients had skin reactions during CRT.

**Conclusion:** In patients with locally advanced rectum tumors, neoadjuvant CRT provides a 14.3% complete response in primary tumors, and 66% complete response in lymphatic tumors; it provides 25% sphincter protection in sub-localized tumors and effective pelvic control without any intolerable acute response. Local recurrence development reduces the survival and high recurrence rates after RT are still determinative in terms of overall survival, requiring more effective systemic therapies.

**Keywords:** Rectum cancer, neoadjuvan radiotherapy, survival

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## OP-087 [Colon and Rectum Surgery]

# The Clinicopathologic Results of Complete Mesocolic Excision in Right Colon Cancer

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**Objective:** Based on the same principles as total mesorectal excision, the complete mesocolic excision (CME), started to be applied in the treatment of colon cancer, has been used routinely in the surgery of colon cancer in recent years. In this study, the

clinicopathologic results of the patients who had resection with CME due to right colon cancer and the patients who had resection with classical method were compared.

**Material and Methods:** The data of a patient who was operated by the same team due to right colon cancer between November 2010 and January 2017 were prospectively recorded in colorectal cancer database and retrospectively reviewed. The patients were divided into two groups as those who had been operated with classical method before 2013 (non-CME) and as those who had been operated with complete mesocolary excision (CME) since that date. The demographic characteristics of the patients, operation durations, amount of hemorrhage during the operation, time to start nutrition, duration of hospitalization, tumor staging, total number of lymph nodes removed, and the postoperative morbidity and mortality rates were examined and compared. The inclusion criteria were  $\geq 18$  years of age and curative resection, and the exclusion criteria were  $< 18$  years of age, palliative surgery, appendix tumor, the presence of synchronous tumor, recurrent colon tumor, IBD, and polyposis syndromes. Statistical analysis was performed using the SPSS statistical package (SPSS Inc., Chicago, Illinois) integrated with Medcalc® software version 9.4.2.0 (Mariakerke, Belgium). Significance level was determined as  $p < 0.05$  in all analyses. The equality of group averages and the comparisons between the ratios were analyzed with unpaired Student's t test and chi-square test, respectively.

**Results:** Of the 78 patients included in the study, 47 (60.3%) were in the CME group and 31 (39.7%) were in the non-CME group. The demographic data were similar in both groups ( $p > 0.05$ ). The durations of operations ( $118.5 \pm 27.4$  vs  $116.3 \pm 27.6$ ,  $p = 0.73$ ), the amounts of hemorrhage ( $74.2 \pm 28.1$  vs  $71.9 \pm 26.9$ ,  $p = 0.21$ ), time to start nutrition ( $3.3 \pm 0.59$  vs  $3.29 \pm 0.53$ ,  $p = 0.95$ ), and the durations of hospitalization ( $7.85 \pm 3.36$  vs  $7.45 \pm 1.29$ ;  $p = 0.52$ ) were similar. The number of total lymph nodes removed ( $32.1 \pm 12.2$  vs  $21.5 \pm 9.6$ ;  $p = 0.0001$ ) was observed to be significantly higher in the CME group. While 38% (20 patients) of patients were in stage IIA, 30.7% (24 patients) were in stage IIIB. While the number of lymph nodes removed in stage IIA patients ( $33.75 \pm 10.1$  vs  $20.6 \pm 10.13$ ,  $p = 0.0023$ ) was significantly high in the CME group, it was similar in both groups in the stage IIIB patients ( $29.8 \pm 17$  vs  $25.7 \pm 11.1$ ,  $p = 0.51$ ). The development of morbidity (14.8% vs. 3.2%,  $p = 0.13$ ) was similar in both groups, and postoperative mortality was not observed.

**Conclusion:** It is thought that bleeding and postoperative complications decrease in the classic method of colon cancer surgery, nutrition is started early and the duration of hospitalization is shorter. Since D3 lymph node dissection is not performed in the classic method, a certain amount of remaining lymphatic gland is disturbing and an inadequate condition oncologically. Our study has shown that CME can be safely preferred due to the durations of operation, hemorrhage rates, durations of hospitalization, morbidity rates and significant rates of lymph node dissection, which are similar to the conventional method.

**Keywords:** CME, lymph node, clinicopathologic

## OP-088 [Colon and Rectum Surgery]

# Is the Application of Robotic Colorectal Surgery Becoming Centralized?

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**Objective:** Robotic surgery is being developed to overcome the limitations of laparoscopy and to facilitate the use of minimally invasive surgery. Although it has been used for about twenty years considering all surgical branches, there is insufficient information about the current status of robots in colorectal surgery. This study aims to show the place of robotic technology in colorectal practice throughout our country.

**Material and Methods:** Robotic colorectal surgery operations performed between January 2013 and June 2017 were included in the study. The data were obtained from the prospectively recorded database. The information of patient, surgeon and hospital were kept confidential. The type of operation, the year of operation, the type of robot used (S, Si, Xi), the hospital case-volume and the surgeon case-volume were used as parameters. The hospitals and surgeons with a case-volume of 75th percentile and above were defined as high-volume robotic colorectal hospital and surgeon.

**Results:** A total of 799 colorectal surgery operations were included in the study. These surgeries were performed by 47 surgeons in 25 hospitals. Three hundred and forty-one (42.7%) operations were completed with S-Si and 458 (57.3%) operations were completed with Xi. Currently, 4 hospitals use Si and 8 hospitals use Xi. Two hospitals have both Si and Xi. Colorectal surgery case-volume increases with years. The annual median number of cases per hospital and surgeon is 13 (range, 1-171) and 5 (range, 1-151), respectively. There are 6 high-volume robotic colorectal hospitals ( $\geq 40$  cases). There are 12 high-volume robotic colorectal surgeons ( $\geq 23$  cases). High-volume robotic colorectal surgeons completed 81% of all cases. Seven of the high-volume robotic colorectal surgeons used Si and 5 used Xi. Except for one surgeon who abandoned using the robot after 27 cases, other surgeons continued to use the robot after 11 operations. Before Xi, only 2 left colon resections had been performed and no right colon resection had been performed.

**Conclusion:** The results of this study show that the robotic colorectal surgery is becoming centralized. This situation increases the hospital and surgeon case-volume and suggests an improvement potential in postoperative outcomes. It was seen that most surgeons who abandoned the use of robots did not complete the learning curve.

**Keywords:** Colorectal surgery, minimally invasive surgery, robotic surgery

## OP-089 [Colon and Rectum Surgery]

# Micro-fragmented Adipose Stem Cell Application in the Treatment of Complex Anal Fistula

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**Objective:** The aim of this study is to evaluate the early results of the safety and efficacy of autologous micro-fragmented adipose tissue injection along with the repair of the internal orifice in the recovery of the recurrent complex anal fistula.

**Material and Methods:** A study was conducted for the treatment of the patients who were admitted due to recurrent complex anal fistula. All patients were evaluated with 3-D Endorectal Ultrasonography (BK medical® 360°D). A total of 10 patients underwent fistula channel curettage+repair of internal orifice of fistula and autologous, micro-fragmented adipose tissue injection were performed under spinal anesthesia in the same session in lithotomy position. FDA-approved Lipogems® system was used to prepare autologous micro-fragmented adipose stem cells. Liposuction was performed from the fatty region of the abdomen. Follow-up visits were held on the postoperative 7th, 30th, 60th and 90th days. Follow-ups for late results are still continuing. Fistula healing was defined as the closure of the internal and external openings without any leakage. The mean duration of surgery was 45±7 min (range 40-80 min). Postoperative pain score that was measured with visual analogue pain scale was 2±1.2 (range 0-4). An improvement was observed in 8 (80%) of 10 patients 3 months later. In the field of application around the fistula, 2 patients had perianal abscess, 1 patient had hematoma, and minor hematoma and ecchymosis were observed in 2 patients who underwent liposuction.

**Results:** As a result; in addition to the surgical treatment performed with the curettage of the fistula tract and the closure of its internal orifice, autologous micro-fragmented adipose injection is a safe, applicable and repeatable procedure, and it can be applied for the recovery of complex anal fistula in compliance with the early results.

**Keywords:** Adipose tissue, anal canal, lipogems, fistulas, lipectomy

## OP-090 [Colon and Rectum Surgery]

# The Efficacy of Crystallized Phenol Treatment in Hidradenitis Suppurativa Observed in the Sacral Region

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**Objective:** Hidradenitis Suppurativa (HS) is a chronic inflammatory skin disease progressing with painful nodules, abscesses, scarring and sinus tracts, which are seen in the intertriginous regions rich with apocrine glands. It is stated that its incidence changes between 0.05% and 1% in the general population. It is more common in women, obese people and smokers. It is most commonly observed in axillary, inguinal, and perianal regions. The main pathology is the congestion that occurs in the upper part of follicular pilosebaceous unit, and associated inflammation and lymphocytic response. Surgery, antibiotics, steroids, immunological agents and many other molecules are tried and used in the treatment. In this study, we aimed to demonstrate the efficacy of crystallized phenol in the treatment of patients with HS in sacral region.

**Material and Methods:** The files of HS patients treated with crystallized phenol between 2009 and 2017 were retrospectively reviewed. The Hurley Staging System was used to assess the severity of the disease. The disappearance of pain and swelling, and the closure of sinus tracts were accepted as the complete response to the treatment. Decrease in patient complaints and significant increase in the comfort of life were considered as the partial response to the treatment. The data were statistically evaluated with IBM SPSS 20 and the 'p' value less than 0.05 was accepted to be statistically significant.

**Results:** Twenty-five HS patients who were treated with crystallized phenol between 2009 and 2017 were included in the study. Of the patients, 24 were male, 1 was female. Despite the fact that it is more common in women in the general population, the high number of male patients in our study is because our center conducts treatments on pilonidal sinus and because all patients have admitted due to gluteal disease. The mean age was 38.6 (range 19-48), and the mean BMI was 27.88 (range 21.4-33.7). Thirteen of the patients were Hurley stage 1, 5 were stage 2 and 7 were stage 3. The average number of applications was 3.98 (2-9) and the average duration of application was 6.25 (1-12) months. While there was partial response only in 4 of the 25 patients, 21 patients gave complete response to the treatment. Interestingly, 4 patients with partial response were the patients with Hurley stage 1 and 2. No recurrence was observed in 15 of the patients. Recurrence was observed in 10 patients. In 8 of these patients, recurrence was observed once; while complete response was obtained in 7 patients, partial response was achieved in one of them. Recurrence was observed twice in 2 patients and they were followed up as the patients with partial response. All of the patients who had recurrence later and were followed up as the patients with partial response were Hurley stage 3 patients.

**Conclusion:** HS is a skin disease that seriously disturbs the patient comfort. Although the most effective method seems to be surgery, various methods such as antibiotics, steroids, and immunological agents are also applied. We have performed crystallized phenol therapy in our HS patients at various stages and found in long-term follow-ups that crystallized phenol is an effective option that should be considered in the treatment of HS.

**Keywords:** Hidradenitis suppurativa, crystallized phenol, sacral region

## OP-091 [Colon and Rectum Surgery]

# Robotic Mesocolic Excision and Conventional Laparoscopic Colectomy in the Treatment of Right Colon Cancer

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**Objective:** Although the complete laparoscopic mesocolic excision has been proven to be safely applicable, this approach is not widely applied due to technical difficulties and potential complications. Because of its imaging and instrumental advantages, robotic approach can be used without increasing the complication rate of the minimally invasive complete mesocolic excision. In this study, the results of robotic complete mesocolic excision (RCME) and conventional laparoscopic right colectomy (CLRC) were compared.

**Material and Methods:** The patients who were operated due to right-sided colon cancer for curative purposes between February 2015 and September 2017 by two surgical teams that completed learning curve were included in the study. The demographic information, perioperative and histopathological results of the patients were examined and compared.

**Results:** A total of 96 patients (Robotic, n=35) were included in the study. The mean duration of surgery was significantly longer in the robotic group (RCME 286±77, CLRC 132±40 min, p=0.0001). There was no conversion in both groups. There was no significant difference between the groups in terms of mean blood loss (RCME 75±70 vs CLRC 73±57, p=0.57), the onset of bowel movements (RCME 3±1 vs CLRC 2±1, p=0.16), duration of hospitalization (RCME 6±3 vs CLRC 6±3 days, p=0.64) and follow up periods (RCME 15±8 vs CLRC 16±10 months, p=0.11). Total complication rates were found similar (n=10 [29%] vs. n=15 [25%], p=0.67). In the RCME group, two vascular injuries that occurred during the operation were repaired using robotic system without the need for conversion. In the statistical analyses, the mean number of lymph nodes obtained after RCME operations (41±12 vs 33±10, p=0.04) and the distance between the vascular ligament and the colon wall (13±3.5 vs 11±3 cm, p=0.02) were found significantly higher in comparison to CLRC group.

**Conclusion:** In the treatment of right colon cancer; in comparison to the standard treatment, RCME may increase the quality of the obtained specimen without increasing perioperative and short-term morbidity.

**Keywords:** Colon cancer, robotic surgery, complete mesocolic excision, laparoscopic surgery, right colectomy

## OP-092 [Endocrine Surgery]

# Anatomo-histological Analysis of Transoral Endoscopic Thyroidectomy Vestibular Approach (TOETVA)

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**Objective:** Transoral endoscopic thyroidectomy vestibular approach (TOETVA) is very new surgical procedure and can be performed in a limited number of centers. In order to conduct researches and give education; the main purpose of the study is to be able to apply the operative steps in Modified Larssen solution (MLS)-fixed cadavers to make anatomical and histological determination of the structures which the trocars pass through during the surgery, and to determine the structures that can possibly be damaged.

**Material and Methods:** A total of 4 cadavers, 2 of which were MLS-fixed and 2 (10%) were formalin-fixed, were used in the study. Initially, the stages in 4 patients who underwent TOETVA surgery were determined and digitally recorded. Subsequently, the part of the fascia superficialis above the platysma was dissected from below the skin dermis as a flap in 2 MLS-fixed cadavers and the structures which the trochars passed through in the lower lip, jaw and neck muscles were shown. The lower lip and neck muscles were dissected in formalin-fixed cadavers in order to compare the cadavers in which trocars were and were not used. The face and neck were dissected as a surgical field mask in another formalin-fixed cadaver and a sample including the locations where the trocars passed through in a grid system was taken for histological examination. After histological follow-up, histopathologic analyses were performed on nerve, muscle and other structures in the lower lip region, being stained with hematoxylin & eosin and Masson-tricrom.

**Results:** The lip, neck skin traction and hydrodissection can be performed in cadavers. Median trocar passes through the lower edge of m.orbicularis oris, between the fibers of m.mentalis gripping the jaw tip and above the periosteum. The lower end of the median trocar was found to be located in the subplatysmal plane just below the jaw. It was observed in all cases that the lateral trocars passed from below the m.orbicularis oris and from inside to outside without causing any tears in muscle fibers. The lateral trocar was then found to pass through m.depressor labii inferioris fibrils to superficial plane (epiplatysmal). The direction of the trocars was close to the direction of the muscle fibers and it was determined that the muscle fibers were not torn but were forced apart by the trocars. On one side, the most medial fibers of the m.depressor anguli oris stretched from the lateral onto the trocar. It was determined that, on one side of the neck, the lateral trocar passed through the platysma fibers to the subplatysmal plane. The other two lateral trocars were observed to pass to the subplatysmal plane, through more medial, without puncturing the platysma. It was found that the lower part of the lateral trocar passed through above the surface of the for. mentale. Educational graphics showing the surgical stages and the structures were produced from the obtained data using graphic softwares. After histological follow-up, degenerative effects in the nerves, muscles and other structures and their distributions were determined in stained preparations.

**Conclusion:** Hydrodissection and skin traction can be performed easily in MLS-fixed cadavers, and TOETVA application training can be given. The anatomical route of the trocar in the jaw tip and the neck is shown in detail. This data will assist surgeons while performing the surgery and later, in the evaluation follow-up of the patients. The training materials created from the data obtained from the research will be useful for the learning and dissemination of the TOETVA surgery.

**Keywords:** TOETVA, surgical anatomy, lower lip-jaw muscles, m. platysma, n. mentalis

## OP-093 [Endocrine Surgery]

# Electromyographic Evaluation of Motor Functions of Extralaryngeal Branches of Recurrent Laryngeal Nerve

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**Introduction:** The motor function of the external branches of the recurrent laryngeal nerve (RLN) has recently been evaluated with intraoperative nerve monitoring (IONM) in thyroid surgery and it has been reported that the anterior branch has a continuous motor function and the posterior branch has a motor function between 1% and 17.5%. The surface electrode EMG obtained with the IONM shows the motor function of the thyroarytenoid muscle (TAM), which is the main adductor part of the vocal cord. In some studies, the motor function of the posterior cricoarytenoid muscle (PCAM), the main abductor of the vocal cord, was assessed by manual palpation of the laryngeal contraction. In this method, the contraction of other larynx muscles or the cricopharyngeal muscle can be evaluated as PCAM contraction, and this method has no recordable objective data. Since electromyography (EMG) is the gold standard in evaluating the motor function of muscles and offers objective data, we aimed



to evaluate TAM and PCAM innervation of extralaryngeal RLN through EMG. The patients in whose thyroid lobe primary surgery was performed by a single surgeon using a surface electrode endotracheal tube with the guidance of IONM in 2016 to 2017 were included in the study and the data were evaluated prospectively. At the end of the operation, electromyographic data of both TAM and PCAM were recorded in the patients meeting the criteria. The function of the TAM, which is the main adductor of the vocal cord, was recorded by electrodes on the endotracheal tube with surface electrode EMG technique. The function of the PCAM was recorded through EMG performed with the needle electrodes applied intramuscularly. EMG recordings were obtained by stimulating both the anterior and posterior branches of extralaryngeal RLNs.

**Case:** One hundred and seventy-one patients (133 Female, 38 Male) with a mean age of 47.9+14.2 (17-89) were included in the study. A total of 279 operations were performed in the neck of 108 patients bilaterally and in 63 patients unilaterally. Extralaryngeal branching was detected in 100 of 279 RLNs (35.8%). The number of extralaryngeal branches were 2 in 94 nerves, 3 in 4 nerves, and 4 in 2 nerves. While motor function was detected only in anterior branches in 95 of the branching nerves, 5 nerves (5%) with two branches had motor function in both the posterior and the anterior branches. The motor function in both branches was unilateral in 3 of the 4 female patients and bilateral in one patient. In all nerves, motor innervation was detected in both TAM and PCAM in the anterior branch. Motor innervation was detected in 3 nerves of the posterior branch in both TAM and PCAM. Innervation was detected to TAM only in one nerve, and to PCAM in one nerve. In both muscles, the major innervation was from the anterior branch, and EMG amplitude value ranging from 4% to 28% from the posterior to the anterior branch was detected.

**Conclusion:** According to the study results in which both abductor and adductor functions of RLN were first evaluated with intraoperative EMG; the anterior branch of the RLN is the major motor nerve of both the adductor and abductor muscles of the vocal cord. Sometimes, the posterior branch may also have both abductor and adductor motor function, or it may have only an abductor or an adductor motor function. All branches of the RLN must be protected.

**Keywords:** Recurrent laryngeal nerve, intraoperative nerve monitoring, posterior branch motor function

## OP-094 [Endocrine Surgery]

# The Comparison of Primary Repair and Repair with Polyglycolic Acid Coated Tube in Recurrent Laryngeal Nerve Cuts (An Experimental Study)

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**Objective:** Thyroid gland diseases are the most common endocrine pathologies, and thyroidectomy is one of the frequently performed operations. Recurrent laryngeal nerve (RLN) injury is an important complication of thyroid surgery. Nowadays, RLN injury can be repaired with primary repair, or with autogenous nerve or vascular graft. In our study, it was aimed to compare the effects of primary repair and polyglycolic acid coated tube repair on nerve function and regeneration in RLN cuts in rats.

**Material and Methods:** Twenty-seven female Wistar albino rats, each of which was approximately 3 months old, were used for this study. Three groups with 9 rats in each were constituted. They were divided as Group-1 in which only nerve incision was performed, Group-2 in which primary repair was performed, and Group-3 in which conduit repair was performed. The study was planned through two-stage surgery. The vocal cords were evaluated with a mini endoscope before both surgeries. In the first surgical step, a nerve defect was created and nerve repair was performed in the same session. The second surgical step was performed 4 months later. In the second surgical step, specimens were taken for histopathological examination from the subjects and they were sacrificed.

**Results:** The vocal cord movement was found to be higher in Group-3 than in the other groups. However, it was observed that there was no statistically significant difference in the intergroup comparisons ( $p < 0,239$ ). The number of axons was found as  $81,5 \pm 5,29$  in Group-1, as  $111,1 \pm 5,92$  in Group-2 and as  $155,6 \pm 5,78$  in Group-3. There was a significant correlation between the number of axons and vocal cord mobility. The high number of axons in Group 3 supports the high rate of vocal cord movement. No inflammation was observed in Group-1. Little inflammation was seen in 12.5% of Group-2 and in 50% of Group-3; there was much inflammation in 12.5% of Group-3. When the inflammation was compared in all groups; it was seen that a significant amount of inflammation developed in Group-3 compared to the other groups ( $P < 0,029$ ). When Group-3 and Group-2 were compared, it was determined that the development of inflammation was not significant. Dysfunction of fascicular organization was observed at a rate of 12,5% in Group-1 and at a rate of 50% in Group-2. Dysfunction of fascicular organization was detected in the entire Group-3. Foreign body reaction did not occur in Group-1. Foreign body reaction was observed at a rate of 37.5% in Group-2 and at a rate of 87.5% in Group-3. When Group-3 and Group-2 were compared, it was found that the development of more foreign body reaction was not significant in Group-3. Vascular proliferation was seen in 12.5% of Group-1, in 12.5% of Group-2 and in 62.5% of Group-3.

**Conclusion:** In our study, the vocal cord movement was found to be higher in the group treated with PGA coated conduit than in the other groups. However, it was seen not to be significant that in the intergroup comparison. The fact that the vascular proliferation in rats treated with PGA-coated tube was more than the primary repair was not significant. There was a significant correlation between axon regeneration and the use of PGA coated conduit. Contrary to what is known; it was observed that PGA-coated conduit could lead to foreign body reaction, inflammation and dysfunction of fascicular organization. We believe that PGA-coated conduit can lead to more accurate orientation of nerve fibers by creating an isolated environment in comparison to primary repair, and thus it can result in functional improvement in the nerve.

**Keywords:** Recurrent laryngeal nerve, primary repair, repair with conduit (polyglycolic acid coated tube)

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## OP-095 [Administrative Issues]

# The Difficulties with Regards to Patients and Cost Analysis in Thyroid Cancer Treatment

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**Objective:** The financial burden of thyroid cancer treatment mainly consists of radiological and biochemical examinations, biopsy and pathology expenses, possible radioactive iodine treatment during and after surgery, hormone replacement therapy and follow-up procedures. Having a health insurance that covers cancer treatment and other related costs is important for many patients.

**Material and Methods:** The health insurance program of thyroid cancer patients diagnosed and treated by a single surgeon in our clinic between May 2014 and January 2018 was retrospectively analyzed using the hospital database. The proportions of the payments that patients met with general health insurance, private health insurance, and with their own resources were examined. Following the pathology reports, all patients were referred to Nuclear Medicine programs of an external center because of the lack of radioactive iodine treatment in our hospital and the controls were continued in our polyclinic after the treatment. The waiting periods of the patients in our hospital and the difficulties they faced in other hospitals were evaluated with a mini-questionnaire. While they graded the waiting duration for the operation as very long, long, reasonable, short, and very short, they scored the services received at the external center as very poor, poor, reasonable, good and very good.

**Results:** Thyroid carcinoma was found in 77 (29.6%) of a total of 260 patients in whom total thyroidectomy was performed by a single surgeon in our clinic. After completing the preoperative preparations following the biopsy reports of these patients, the average waiting period for the operation was calculated as 1 month (range, 3 weeks-3 months). The mean duration of hospital stay was 3 days (1-14), including long hospitalizations due to surgical complications and accompanying comorbid diseases after total thyroidectomy. The duration of stay in postoperative intensive care unit (ICU) is also included. In our data, the general health insurance was supplied by the state in the majority of 77 patients (n=74, 96.1%). Only 3 patients (3.8%) used their own financial resources for treatment. The patients scored the waiting periods for the operation as reasonable (n=32, 41%), long (n=26, 33%), very long (n=10, 12%), short (n=8, 10%) and very short (n=1, 1%), and they evaluated the service they received at the external center as very poor (n=47, 61%), poor (n=21, 27%), reasonable (n=8, 10%), good (n=1, 1%) and very good (n=0, 0%).

**Conclusion:** The majority of the oncology patients who are treated in our clinic are covered by the state health insurance. Given the possible financial burden that oncology patients will encounter, it is important to have a state general health insurance for the convenience of the patient. When evaluated in terms of patient satisfaction, it is seen to be sufficient in preoperative, operative and postoperative periods for thyroid cancer, but it is insufficient for the therapies such as radioactive iodine ablation in external centers. We think that the ability to apply all treatment algorithms in one center will increase the patient satisfaction and decrease the costs.

**Keywords:** Health insurance, cancer, oncology, financial support

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## OP-096 [Endocrine Surgery]

# The Factors Affecting the Skip Metastasis in Papillary Thyroid Cancer Patients

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**Objective:** Cervical lymph node metastasis is a frequently encountered symptom in papillary thyroid cancer (PTC) and is associated with locoregional recurrence. Skip metastasis is defined as the presence of metastasis in lateral cervical compartment while there is no metastasis in central cervical compartment, and its frequency ranges between 6 to 19.7% in the literature. The aim of this study is to determine the frequency of skip metastases in PTC, and the clinical and pathological factors affecting skip metastasis.

**Material and Methods:** Of the 144 patients in whom neck dissection was performed between May 2010 and September 2017 in our clinic; sixty-eight patients who were diagnosed with PTC or micropapillary thyroid cancer (mPTC) and who underwent both central and lateral neck dissection (LND) in the same session along with thyroidectomy were included in the study. The demographic data, laboratory findings, surgical operations and pathologic findings of these patients were obtained by reviewing the medical records retrospectively. Nineteen patients with insufficient data in their medical records and with fewer than 6 lymph nodes excised in central neck dissection (CND) according to the final pathology results were excluded from the study.

**Results:** Nineteen of the 49 patients (38,8%) who were included in the study were male and 30 (61,2%) were female. The mean age was 41.2 (15-77) years. Skip metastasis was observed in 9 patients (18.4%). When these patients were compared with the patients without skip metastasis in terms of age, gender, tumor size, number of metastatic lymph nodes, histological subtype, multifocality, bilaterality, tumor localization, capsule invasion, extracapsular spread, and lymphovascular invasion; only the tumor size smaller than 1 cm in univariate and multivariate analyses was found to be statistically significant ( $p<0.05$ ). While only 5 (12.5%) of 40 patients with PTC had skip metastasis according to the final pathology results, 5 (55.5%) of 9 patients with mPTC had skip metastasis.

**Conclusion:** Classic lymph node metastasis in PTCs is seen as a gradual spreading first to the ipsilateral central compartment, then to the ipsilateral lateral compartment, then to the contralateral compartments and mediastinal lymph nodes. In this study, clinicopathologic features of the tumors that are reported in the literature to have skip metastasis and local recurrence more frequently were reviewed. In the study which included only the patients with PTC who underwent thyroidectomy, CND and LND in the same session, the rate of skip metastasis has been found to be 18.4%, which is consistent with the literature. Among the clinical and pathological features that were examined, only the tumor size smaller than 1 cm was found to be statistically significant. This suggests that skip metastasis is a common condition in PTCs and that pre-operative prediction is not possible. The higher incidence of skip metastasis in mPTCs emphasizes the importance of CND in patients in whom lateral neck metastasis is detected at the time of diagnosis or follow-up.

**Keywords:** Neck dissection, papillary thyroid cancer, skip metastasis

## OP-097 [Endocrine Surgery]

# Bethesda Classification and Increasing Incidence of Thyroid Cancer... Is it real?

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**Objective:** Between May 1993 and March 2018, 657 patients underwent surgery with the prediagnosis of various thyroid pathologies. Thyroid cancers are a very common pathology. However, mortality is low particularly in well-differentiated types.

**Material and Methods:** A total of 657 patients who underwent surgery between January 2005 and February 2018 were evaluated retrospectively. Clinical manifestations of histopathologic diagnoses and Bethesda classification were investigated.

**Results:** The removed thyroid tissues were subjected to histopathological investigation. While usual examinations and evaluations were found to be satisfactory until December 2010 (Group 1), the assessments were made according to the BETHESDA classification after January 2011 (Group 2). There were 519 patients in Group 1. The number of cases with histopathological malignancy in this group was 60 (11.56%). In Group 2, there were 138 cases. The number of lesions that were histopathologically found to be malignant was 70 (50.72%). We decided to repeat our study that we performed in 2010 due to the clinical findings of the detected difference and their effects on research findings. We compared the results by repeating the study titled "Does calcification in the thyroid gland predict malignancy?" published in "Bratislava Medical Journal, 113: 552-555" in 2012. This study covers the period up to May 2010, and 17 (30.91%) malignancies were encountered in 55 thyroid calcifications while 12 cases (10.52%) were found in 114 cases without calcification ( $p<0.001$ ). Thyroid intervention was performed in 138 cases since 2011 when the BETHESDA classification was started to be used for the histopathological evaluation of our cases. Histopathological examination revealed thyroid malignancy in 67 of them. Likewise, calcification was detected in 42 of them by imaging methods or histopathological examination. While the number of malignancies in the group with calcification was 20 (47.92%), malignancy was detected in 47 patients (48.95%) in the group without calcification ( $n=96$ ) ( $p=0.885$ ).

**Conclusion:** In the regions where the Bethesda classification is commonly used, the rate of thyroid cancer is high. This result suggests a suspicious situation.

**Keywords:** Thyroid cancer, Bethesda classification, thyroid calcification

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## OP-098 [Emergency Surgery and Trauma]

# The Rare Nontraumatic Emergency Surgical Indication of Spleen; Wandering Spleen

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**Objective:** Wandering spleen is one of the rare and life-threatening emergency surgical indications of the spleen, other than traumas. We aimed to present this study with the aim of reminding the wandering spleen in cases of masses with occasional and shifting pains in the lower quadrants of the abdomen and of discussing the possible therapies.

**Material and Methods:** Six patients who underwent splenectomy due to wandering spleen in the general surgery clinic of our hospital between 2008 and 2018 were retrospectively reviewed. The patients were examined retrospectively in terms of age, gender, complaint at the admission, physical examination, spleen size and laboratory findings.

**Results:** Of the patients whose mean age was 29.2 and all of whom were female, five were admitted with the complaint of acute abdomen, whereas one was admitted with the complaint of chronic abdominal pain. The spleen sizes measured in pathologic specimens ranged from 15 to 30 cm (mean: 19.3 cm) in the long axis. There was necrosis in the spleens of all patients at different rates. Hemoglobin levels of the patients ranged from 6.0 to 10.6 (mean: 9.3).

**Conclusion:** The wandering spleen occurs due to the congenital absence of splenorenal and gastrosplenic ligaments or because they are lost with acquired reasons. Trauma, history of previous abdominal surgery, splenomegaly, and muscular atrophies have been mentioned among the acquired causes in the literature. No etiologic cause was detected in any of our patients. It is said that hormonal factors or pregnancy can also show this effect. Wandering spleen is often seen in women between 20 and 40 years of age. The average age of our patients is consistent with the literature. The real incidence of the cases of wandering spleen, a rare pathology, is not known because it is asymptomatic as long as pedicle torsion does not develop. While five of the patients were admitted to the emergency service with acute abdomen, one was admitted with the complaint of a severe abdominal pain that lasted for 15 days. When the laboratory values of the patients were examined; while the hemoglobin value of the 5 patients ranged from 9-10.6 gr/dl in the hemogram, it was 6 gr/dl in one patient. After the pedicle torsion, many symptoms may occur that can also threaten life. The most common symptoms are overgrown spleen due to venous congestion and subsequent spleen infarction, acute abdomen, sepsis and acute pancreatitis. Along with the splenic torsion; stomach, pancreas and stomach torsions and very rarely a thrombus in the portal venous system as in our case have been reported. Ultrasonography, computed tomography, MRI and scintigraphy are frequently used imaging modalities for the diagnosis. Not observing the spleen at the normal site through computed tomography and observing the splenic ecogenesis in another part of the abdomen, usually in pelvic area, is diagnostic. Splenopexy is the preferred treatment if splenic infarction and necrosis have not developed in wandering spleen torsions. Splenectomy is recommended in the presence of splenic infarct and necrosis. As a conclusion, it is important to remember wandering spleen in occasional painful masses in the lower quadrants of the abdomen; it should not be forgotten that it may lead to life-threatening complications, and patients should be carefully evaluated in terms of the need for an emergency surgery.

**Keywords:** Wandering spleen, splenectomy, emergency surgery, wandering

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## OP-099 [Emergency Surgery and Trauma]

# The Correlation of the MELD Score with Mortality and the Duration of Hospitalization in Patients Followed Up with the Diagnosis of Acute Abdomen

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**Objective:** We aimed to investigate the prognosis of chronic liver disease and whether or not the MELD score (Model for End-stage Liver Disease) used for determining liver transplantation patients was associated with the mortality and the duration of hospitalization in patients hospitalized and followed up with the diagnosis of acute abdomen.

**Material and Methods:** The patients who were decided to be hospitalized from the emergency service with acute abdomen within the last 6 months were retrospectively reviewed. The patients under the age of 18 and pregnant patients were excluded. The date of birth, gender, the duration of hospitalization, whether they died or not, INR, bilirubin and creatinine values were recorded. According to the MELD score, the patients were divided into two groups as  $<10$  and  $>10$ .

**Results:** The mean age of the 100 patients included in the study was  $52.82 \pm 20.14$  years, and 52 of them were male and 48 were female. When the groups with MELD scores  $<10$  and  $>10$  were compared, the duration of hospitalization was significantly higher in the group with MELD score  $>10$  ( $p=0.000$ ). The number of patients who died was significantly higher in the group with the MELD score  $>10$  ( $p=0.017$ ).

**Conclusion:** The MELD scoring system was first described by Malinchoc et al. It is obtained by using INR, total bilirubin and creatinine levels. In addition to determining the prognosis of end-stage liver patients and forming the order of patients for liver transplantation; the MELD score is also used to determine the prognosis of patients in intensive care unit. It is found high due to the increased levels of INR, total bilirubin and creatinine in the cases of sepsis, hemolysis, and renal and cardiac insufficiency. The prognosis worsens in such accompanying cases. The MELD score can be used to estimate the length of hospital stay and the prognosis of the disease in patients followed up with the diagnosis of acute abdomen.

**Keywords:** MELD, acute abdomen, prognosis

## OP-100 [Emergency Surgery and Trauma]

# The Management of Anal Region Injuries due to Explosives: Case Report

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**Introduction:** High-energy explosives not only damage organs, but also damage the tissue integrity by affecting a large area of the skin. Vacuum-assisted wound closure methods are frequently used in the treatment of patients with such wide wound defects. This method is a noninvasive method which is applied in a controlled and localized manner on the wound in order to accelerate healing in acute and chronic wounds by providing a negative topical pressure. There is little experience in its use for the deep wounds caused by explosives. For this reason, in this study, we aimed to present our approach with vacuum-assisted wound closure method in a patient with multiple trauma and large-tissue injuries caused by explosives, which is difficult to maintain and manage.

**Case:** A 25-year-old male patient was admitted with multiple fractures in the lower extremity due to explosive exposure and with a large tissue defect including pelvic floor muscles in the anal region. The multiple fractures of the patient were managed with staged surgeries by the orthopedics. When the anal region was assessed, it was determined that rectum integrity was intact. After the hemodynamics of the patient was corrected, laparoscopic loop colostomy surgery was performed to prevent fecal contamination in the wound area. Surgical debridement, deep curettage and irrigation were performed on the large wound defect located in the anal region. The infected and necrotic tissues were removed, and the rectal stump was washed repeatedly. Following these surgical interventions, vacuum-assisted wound closure was performed in the anal zone and the rectum was preserved. The patient was explored every 2-4 days, and approximation sutures were placed when needed. A total of 15 sessions of vacuum-assisted wound closure were applied to the patient. After these operations, full recovery was observed in the perirectal injury. Subsequently, sphincter function was assessed with anal monometer and it was assessed that the patient had adequate continence. Accordingly, it was decided to close the colostomy of the patient. The scheduled rehabilitation process is still continuing.

**Conclusion:** In deep tissue injuries and subsequent soft tissue infections caused by high-energy injuries such as explosives, vacuum-assisted wound closure is a good treatment option for accelerating wound healing with the increased local blood flow, with the acceleration in the development of granulation tissue, and with the control of edema and exudates. In addition to healing, it also prevents the local infection to pass to the systemic circulation with negative pressure, thus prevents the possible sepsis picture. We propose that this method, which has been proven successful in many complicated wound management with our clinical experience, should also be used in post-explosive infected tissue defects.

**Keywords:** Anal region, multiple trauma, wound management

## OP-101 [Emergency Surgery and Trauma]

# The Comparison of Trauma Mechanisms and Trauma Scores in Geriatric Patients and in Patients Under 65 Years of Age

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**Objective:** As the world population grows older, the interest in geriatric patient group has begun to increase. In this study, we aimed to compare the geriatric group (GG) trauma patients treated in the emergency surgery clinic of our hospital with the trauma patients of all other age groups in terms of demographic characteristics, injury mechanism, trauma scores, duration of hospitalization, mortality and morbidity rates.

**Material and Methods:** Eight hundred and twenty patients hospitalized in the emergency general surgery clinic of HSU Okmeydanı TRH between June 2014 and December 2017 were included in the study. The patients aged 65 and over were accepted as the geriatric age group. All admitted patients were the patients who came with an ambulance or who were admitted to the emergency service. The demographic features, injury mechanism, vital findings, physical examination findings, laboratory and imaging results, operations performed, hospital stay, morbidity and mortality of the patients over 65 years and under 65 years (US) were prospectively recorded in MS office Excel program. Retrospectively calculated trauma scores were recorded in the same program.

**Results:** The geriatric group constituted 9% of all traumas and the mean age was 75.9. While the female-male ratio was 2/3 in GG, it was 1/7 in US group. Blunt traumas in GG was significantly higher with a rate of 93% than in US group (53%). While the mechanism of injury in blunt traumas in GG was falling and in the first place with 60.3%, this rate was 28.5% in US group. Glasgow coma scale, Revised trauma scores and Trauma Score-Injury Severity Scores (TRISS) were significantly low in patients with longer duration of hospitalization, higher morbidity and mortality in both groups; however, the Injury Severity Scores (ISS) were higher. While sharp object injuries (SOI) in penetrant traumas in US group were in the first place with a rate of 87%, this rate was 55% in GG.

**Conclusion:** Trauma statistics due to injury mechanism, which we think that depend on the location of our hospital, are different from the literature. The durations of hospitalization and prognosis of the patients who are triaged according to their trauma scores can be predicted.

**Keywords:** Trauma score, TRISS, geriatric trauma

## OP-102 [Emergency Surgery and Trauma]

# What Have We Done in Pregnant Women with the Prediagnosis of Acute Appendicitis?

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**Objective:** Although acute appendicitis (AA) is the most common nonobstetric cause of acute abdomen in pregnancy, it is a condition whose symptoms may overlap with pregnancy and other gynecologic symptoms, or in which diagnostic errors may commonly be seen depending on change of intraabdominal localization of the appendix due to pregnancy. In this study, 61 pregnant patients who were followed up and treated with the diagnosis of AA in the Department of General Surgery of YYU Medical Faculty between 2013-2018 were evaluated.

**Material and Methods:** Sixty-one pregnant women (ages ranging from 17 to 50 years) were operated with the prediagnosis of AA in the Department of General Surgery of YYU Medical Faculty between January 2013 and January 2018. Ages, pregnancy trimester status, ultrasonography (USG) findings, Alvarado scores, applied surgical technique and pathologic diagnoses of the patients were evaluated retrospectively.

**Results:** The median age of the pregnant women evaluated in the study was 26.9±6.7 years (17-50 years); 19 of the cases were in the first trimester, 30 in the second trimester and 12 in the third trimester. Appendix could be visualized in the USG (appendiceal transverse diameters ranged from 6 to 15 mm) in 32 cases, and it could not be visualized in 29 cases. When the pathological pieces of 32 patients, evaluated as AA in USG, were examined; 29 of them were found to be compatible with AA. The pathology of 7 of the 29 patients with negative USG was not reported as AA. The accurate diagnosis rate of USG was calculated as 59% in our study. The pathology was reported as normal appendix tissue in 1 of 8 patients with Alvarado score below 5, as lymphoid

hyperplasia in 1 patient and as AA in 6 patients. The pathology was reported as normal appendix tissue in 3 of 16 patients with Alvarado score 5-6, as lymphoid hyperplasia in 1 patient and as AA in 12 patients. The pathology was interpreted as lymphoid hyperplasia in 2 of 19 patients with Alvarado score 7-8 and as AA in 17 patients. The pathology was reported as normal appendix tissue in 2 of 18 patients with Alvarado score 9-10, and as AA in 16 patients. The pathology was reported as AA in 33 out of 37 patients with Alvarado score above 7, and the sensitivity of Alvarado score was calculated as 89.1%. The appendix could not be visualised in USG in 13 of 24 patients with an Alvarado score below 7, and diagnostic surgery was performed in patients with acute abdomen and the pathological pieces were found to be compatible with AA in 8 patients. The appendectomy of 42 cases was started and completed laparoscopically. Twelve patients underwent appendectomy with Mac Burney incision. The appendectomy in 4 patients were started with laparoscopy, and continued with open surgery through Mac Burney incision. C/S concurrent appendectomy was performed in 2 patients. In 1 patient, appendectomy was performed by starting with laparoscopy and continuing with midline incision. The pathology of 51 cases was reported as AA. The pathological pieces of 4 patients were reported as lymphoid hyperplasia and as normal appendix tissue in 6 patients.

**Conclusion:** In this study, AA was most commonly seen in the second trimester of pregnancy. Even though the Alvarado score is low, diagnostic laparoscopy/laparotomy should be performed in pregnant women with acute abdomen, and complications that may develop due to diagnosis delay should be avoided.

**Keywords:** Pregnant, acute appendicitis, alvarado score

## OP-103 [Emergency Surgery and Trauma]

# Our Single-Center Four-Year Experience in Esophageal Perforations

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**Objective:** Esophageal perforation (EP) is a life threatening emergency and requires rapid diagnosis. It is seen in 3.1/1,000,000 people per year. Its rare incidence leads to clinical inexperience and inadequacy in determining the diagnostic and treatment options. Various scoring systems have been defined for this purpose. However, these systems are insufficient in some clinical pictures. Today, parallel to the development of edoscopic treatment methods and interventional radiological procedures, non-surgical approaches in selected patients have begun to be accepted as an alternative for surgical treatment. The aim of this study is to evaluate and compare the surgical and non-surgical methods by classifying the clinical data of the patients with EP using systematic condition and severity index scores.

**Material and Methods:** The patients diagnosed with esophageal perforation in the Department of General Surgery of the Health Ministry University İstanbul Training and Research Hospital between August 2013 and March 2017 were retrospectively examined. The patients who were referred to our clinic for further treatment by different centers were excluded from the study.

**Results:** A total of 13 patients were evaluated with EP diagnosis. Six of them were female, 7 were male, and the median age was 64. While 10 patients were followed up non-operatively as the initial approach, 2 patients were operated later. Pittsburgh Severity Score (PSS) and Clavien-Dindo Classification (CDC) were found to be strongly associated with morbidity, and mortality increased as the score increased ( $p=.026$  and  $p=.032$ ). The mortality increased as the duration of hospitalization, PSS and CDC increased ( $p=.043$ ,  $p=.034$ , and  $p=.002$ ). The duration until diagnosis ( $p=.004$ ), the stay in intensive care unit ( $p=.014$ ), the presence of hypotension ( $p=.014$ ) and the shock status ( $p=.014$ ) were associated with mortality. No statistically significant difference was found between the patients who were operated and the patients followed-up non-operatively.

**Conclusion:** EP management is still controversial. In order to create algorithms in this regard, the need to classify the EPs has arisen. For this reason, different scoring systems such as PSS and systemic conditioning have been proposed. The heterogeneity of etiology, clinical inexperience resulting from its rare incidence, and the need for rapid intervention restricted the effectiveness of these scoring systems in classifying. As a result, the formation of additional subgroups was proposed. In our study, we concluded that rapid diagnosis and infection control in the management of EP treatment were the major parameters, and that the scoring systems and their parameters helped predict disease severity, mortality and morbidity, but were inadequate to determine the choice of treatment modalities. New arrangements should be made so that different groups can be created in EP scoring systems. This requires multi-center prospective studies. We argue that, in order to achieve this, selecting appropriate centers, forming transfer systems, determining the algorithms appropriate for the conditions of our country and following up the patients in these centers will be more useful.

**Keywords:** Esophagus, esophageal perforation, pittsburgh scoring system, systematic condition scoring

## OP-106 [Colon and Rectum Surgery]

# The Effect of Platelet-Rich Plasma on Colon Anastomosis Healing in Experimental Model in which Intraperitoneal Chemotherapy was Performed

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**Objective:** Intraperitoneal chemotherapy (IPC), administered after adequate resection in colorectal cancers with diffuse peritoneal involvement, increases the efficacy of surgical treatment. However, it has been reported that chemotherapeutic agents have a negative effect on anastomotic healing. In this experimental study, we aimed to evaluate the healing effect of platelet rich plasma (PRP) on anastomosis in colon anastomoses treated with IP fluorouracil.

**Material and Methods:** Fifty Wistar Albino rats were used. Ten of them were sacrificed to obtain PRP. Forty rats were randomly divided into 4 groups in equal numbers as the control group (Group 1), 5-FU (Group 2), PRP (Group 3) and PRP+5-FU (Group 4). Left colon resection+anastomosis was performed in all groups. Among the agents investigated in the study; 10 mg/kg 0.9% NaCl was intraperitoneally injected in Group 1, 20 mg/kg 5-FU in Group 2, 1 ml PRP in Group 3, 20 mg/kg 5-FU and 1 ml PRP in Group 4. In Groups 2 and 4, 20 mg/kg 5-FU was injected intraperitoneally on the 1st postoperatively day. All rats were sacrificed on the postoperative 7th day, and anastomotic bursting pressures (ABP) were measured. The anastomotic region was histopathologically examined and tissue hydroxyproline (THP) measurement was performed.

**Results:** ABP was significantly lower in IP 5-FU group than in the other groups ( $p<0.0001$ ). Histopathologically, this difference was attributed to the presence of significant necrosis found in the anastomosis line in Group 2 (group 3,  $p<0.005$ , group 4,  $p<0.009$ ). In addition, THP values were significantly lower than all other groups (all groups,  $p<0.0001$ ). With the PRP application to the anastomosis in the IPC group, a decrease in the presence of necrosis and a significant increase in THP values were detected ( $p<0.005$ ).

**Conclusion:** In this experimental study, it was concluded that the application of IPC significantly reduced the healing in colon anastomosis, and PRP has been shown to improve colon anastomosis healing due to histopathological positive effects.

**Keywords:** Anastomotic bursting press, colon anastomosis, platelet rich plasma

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## OP-107 [Colon and Rectum Surgery]

# The Comparison of Laparoscopic and Open Resection in Rectum Cancer in Terms of Anastomotic Leakage Rates

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**Objective:** One of the most feared complications of rectal cancer surgery is anastomosis leakage. Today, rectum cancer surgery can also be performed by laparoscopic method. It has been reported in meta-analyses that patient recovery is faster after laparoscopic surgery. However, the effect of laparoscopic method on the anastomotic leak, which is the most serious complication of rectum cancer surgery, is still unclear. In this study, we aimed to compare the symptomatic anastomotic leakage rate after laparoscopic and open surgeries in patients with middle and lower rectal cancer.

**Material and Methods:** A total of 171 patients who underwent open or laparoscopic low anterior resection (LAR) for rectal cancer at a distance of up to 8 cm from the anal entrance between January 2015 and June 2017 were retrospectively reviewed. The data were collected from the patient files and automation system. The primary aim of this study was to compare the rates of symptomatic anastomotic leakage between the study groups. Secondary aim was to make a comparative analysis of the length of hospital stay, the number of lymph nodes removed, and the hospital mortality.

**Results:** The patients in both groups were found to be similar in terms of demographic and clinical features such as gender, age, tumor size and stage. The proportion of the patients who received and did not receive preoperative neoadjuvant chemoradiotherapy was also similar. The incidence of symptomatic anastomosis leakage in open and laparoscopic surgeries was 5.4% and 7.8% ( $p=0.57$ ), respectively. Anastomosis leakage occurred in 3.1% of open surgeries and in 4.1% of laparoscopic surgeries, which required relaparotomy ( $p=0.43$ ). The median duration of surgery in patients who underwent laparoscopic LAR was seen to be significantly longer (158 versus 113 min,  $p=0.001$ ). However, there were no significant differences between the groups in terms of the number of lymph nodes removed, the length of hospital stay, and hospital mortality.



**Conclusion:** In this study, the rate of symptomatic anastomotic leakage was at a level comparable with laparoscopic and open LAR. It was also seen that there was no difference in open and laparoscopic LAR in terms of the number of lymph nodes removed and postoperative hospital mortality. Laparoscopic LAR in rectum cancer has been found to be as safe as open method.

**Keywords:** Rectum cancer, laparoscopic resection, anastomosis leakage

## OP-108 [Colon and Rectum Surgery]

# The Factors Affecting the Development of LARS After Sphincter-Preserving Surgery in Rectal Cancer

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**Objective:** The aim of this study is to determine the ratio of major LARS using the LARS score in patients who underwent sphincter-preserving surgery due to rectal cancer and to determine the factors affecting the development of major LARS.

**Material and Methods:** The data of 279 patients who underwent sphincter-preserving surgery for rectal cancer in a university hospital between January 2010 and May 2016 were retrospectively reviewed. The inclusion criteria were as follows; at least a 1-year period after the sphincter-protective surgery, at least a 1-year period after the closure of the protective ileostomy if any, no existing ileostomy, no ongoing chemotherapy or radiotherapy, no metastatic or recurrent disease, and no other colorectal or proctological diseases. The major LARS ratio was determined using the LARS score developed by Emmertsen & Laurberg in 70 patients meeting the study criteria, and the factors affecting the major LARS development were investigated.

**Results:** It was found that major LARS developed in 28.57% of patients. It was found in the univariate analysis that the age, gender, histologic grade of the tumor, T stage of the tumor, stage of the tumor, lymph node involvement, the number of lymph nodes removed, the number of metastatic lymph nodes, mesorectal integrity, adjuvant or neoadjuvant chemoradiotherapy, development of complications, the presence of protective ileostomy, the duration until the closure of the protective ileostomy, the duration after the closure of the protective ileostomy, and the period after sphincter-preserving surgery did not have any effect on the development of LARS. It was found both in univariate and multivariate analyses that tumor size, tumor localization (anal verge distance) and the type of operation (laparoscopy or laparotomy) were effective on major LARS development.

**Conclusion:** The rate of major LARS increases in middle and lower rectal tumors, in surgeries performed with laparoscopic method and as the tumor size decreases. Depending on the preference of the surgeon in opening or closing the protective ileostomy, there is no inconvenience in planning in terms of time.

**Keywords:** Anterior resection, low anterior resection, LARS, rectum cancer

## OP-109 [Breast Diseases and Surgery]

# Rescue Procedures with Latissimus Dorsi Myocutaneous Flap in Breast Cancer Patients in whom Simultaneous Implant Repair Failed and in whom Subcutaneous Mastectomy was Performed

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**Objective:** If the tumor size is large in proportion to the breast, if it is multicentric carcinoma or diffuse ductal carcinoma in situ, the skin and/or nipple protective mastectomy (subcutaneous mastectomy) is also involved in clinical practice. If these patients have a BMI less than 30, a reconstruction option is offered to the patients with implants without donor-site problems and with faster healing. Although it is not common, the implant has the risk of being exposed due to thinning in the anterior and inferior pole in the late postoperative period.

**Material and Methods:** In 18 of 110 patients who underwent repair with simultaneous tissue expander implantation after subcutaneous mastectomy between 2014 and 2017, the reconstruction was continued with Latissimus dorsi muscle-skin flap after

the separation of the wound site in the antero-inferior of the breast. In these patients, there were factors that prevented abdominal region flaps (obesity, scar, patient preference).

**Results:** Twelve patients were diagnosed with invasive ductal carcinoma and 6 were diagnosed with lobular carcinoma, and 14 patients had axillary lymph node dissection. All of the patients received adjuvant CT or RT. The average hospital stay was 6 days. Postoperative follow-up duration was about 10 months (3-22 months).

**Conclusion:** Planning reconstruction again after a failed breast reconstruction has several difficulties for both patients and physicians. Following the persuasion of the patients, before the loss of implants, we recommend reconstruction with the Latissimus dorsi myocutaneous flap, which is the neighboring tissue, by determining the type and amount of the tissue deficiency. The skin island is planned horizontally, vertically or obliquely according to the needs. Except for the minimal separation of the sutures, complications such as seroma, hematoma, partial or total loss of the flap were not observed in the patients. Implant loss occurred in one patient. We preferred the repair with LD prosthesis rather than autologous repair with a free TRAM DIEP, which is the gold Standard, in our tertiary breast reconstruction patients who underwent repairs with unsuccessful implants. We chose this because of the high BMI in our patients, the high risk of fatty necrosis, the possibility of a final reconstruction with the most guaranteed surgical procedure, and the short duration of the postoperative healing period.

**Keywords:** Simultaneous breast reconstruction, latissimus dorsi flap, rescue procedure

## OP-110 [Breast Diseases and Surgery]

# In T2 Invasive Ductal Breast Cancer, the Predictive Value of Tumor and Breast Volume Ratio for Axillary Lymph Node Metastasis

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**Objective:** There is more than one factor affecting the positivity of axillary lymph node metastasis in breast cancers. The aim of this study is to examine whether or not the ratio of tumor volume/breast volume ( $vTm/vMm$ ) has an effect on the presence of axillary lymph node involvement in patients with T2 invasive ductal breast cancer and to examine the contributions of this situation to our treatment approach.

**Material and Methods:** The study was retrospectively conducted on 99 patients with T2 stage invasive ductal cancer who underwent Modified Radical Mastectomy. Breast volumes were measured by fluid overflow method using a measuring cup after surgery. Tumor volumes were calculated using the ellipsoid formula over the diameters detected during pathological examination. The findings were analyzed with the SPSS program.

**Results:** The mean age of the patients was  $50,88 \pm 11,87$ . Axillary lymph node metastasis was negative in 35.4% of patients ( $n=35$ ). Axillary lymph node metastasis was positive in 64.6% of patients ( $n=64$ ). The mean breast volume was  $693.89 \text{ cm}^3$  (median:  $655 \text{ cm}^3$ , min= $180 \text{ cm}^3$ , max= $1800 \text{ cm}^3$ ) in the measurements made in the mastectomy materials. When the largest tumor diameters were evaluated, the mean diameter was 3.15 cm (median: 3 cm, min=2 cm, max=5 cm). The ellipsoid formula was used to calculate the tumor volume ( $V=\pi/6*(a*b*c)$ ). The mean tumor volume was calculated as  $9.58 \text{ cm}^3$ , the median was  $6.28 \text{ cm}^3$ , the minimum value was  $0.63 \text{ cm}^3$  and the maximum value was  $45.01 \text{ cm}^3$ . In the analyses made with SPSS in the light of these results; when the groups with negative and positive axillary lymph node metastases were evaluated through the ROC curve using the largest tumor diameter, tumor volume, and  $vTm/vMm$  ratio, it was seen that the tumor volume and  $vTm/vMm$  ratio were significantly more valuable. The positivity of axillary lymph node metastasis is significantly increased in the case of  $vTm/vMm > 0,016$ .

**Conclusion:** The presence of metastatic axillary lymph nodes is the most important factor in the evaluation of the prognosis and the regulation of the treatment in patients with invasive breast cancer. For this reason, it is very important to predict the lymph node involvements in the preoperative period. Many nomograms have been designed to have this prediction. Studies showing increased positivity in the rates of axillary lymph node metastasis in the presence of palpable tumor in the literature helped us think that palpable tumor was associated with the tumor volume as well as the breast volume and helped to shape the study in this regard. There are also studies that found a relationship between the distance of the tumor to the skin and the axillary lymph node metastasis in breast cancer, and we think that this situation has gained more significance with our study.

In our study, we evaluated the largest tumor diameter, tumor volume, and  $vTM/vMM$  ratio; we have found that  $vTM/vMM$  ratio is an effective prognostic criterion. The most important handicap in our study is that the breast and the tumor volumes were not measured preoperatively. We believe that these measurements can be made faster and more effectively with the help of developing technology in the future.

**Keywords:** Breast cancer, axillary lymph node, metastasis, breast volume, tumor volume

## OP-111 [Breast Diseases and Surgery]

## The Efficacy of Excision and Corticosteroid Treatment in Idiopathic Granulomatous Mastitis

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**Objective:** Granulomatous mastitis is a rare, chronic, and inflammatory disease of the breast that can be diagnosed only histopathologically. Idiopathic granulomatous mastitis (IGM) can be diagnosed after the exclusion of the specific granulomatous mastitis, which can be diagnosed after long and complex clinical, microbiological, immunological, histopathological and radiological examinations.

**Material and Methods:** A total of 153 female patients diagnosed with IGM between January 2000 and December 2015 in our clinic were examined retrospectively. The demographic data, symptom and examination findings, the presence and number of births, breastfeeding, smoking, imaging techniques, diagnosis and treatment methods, recurrence and follow-up of the patients were evaluated.

**Results:** The mean age was 43 (24-80) years. While the most common symptom was a palpable mass in the breast 63 (40%), the number of patients with the symptoms of mass, pain, and redness together was 39 (25%), the number of patients with the symptoms of pain and redness together was 27 (18%) and the number of patients with the complaint of fistula was 16 (11%). Eight (6%) of the patients had previous diagnosis of IGM. Of the patients, 33% had axillary lymphadenopathy in physical examination. While the disease was seen in the right and left breast at an equal rate, none of the patients had bilateral IGM. Fifty-one (33%) patients were smokers. In addition, 142 (92%) of the patients gave birth. While breast ultrasound was the most common imaging method, the most commonly detected sonographic findings were abscess and mass formation. The most common finding detected in mammography was asymmetric density increase and mass formation. As a diagnostic method, excisional biopsy was performed in 76 patients (49%), incisional biopsy in 58 patients (38%), and tru-cut biopsy in 19 patients (13%). Corticosteroid therapy was started in all of the patients as medical treatment. The average treatment duration was 44 days. Recurrence was found in nineteen (12%) patients. The mean duration of recurrence was 13.6 months. The number of patients with recurrence after excisional biopsy and corticosteroid was 12 (8%).

**Conclusion:** The IGM is a disease with frequent recurrences and difficult management which affects the quality of life of patients. We believe that corticosteroid treatment combined with excisional biopsy, which has revealed a success rate of 92% in our study, is an effective treatment method.

**Keywords:** Granulomatous mastitis, mastectomy, corticosteroid

## OP-112 [Breast Diseases and Surgery]

## Prednol Treatment in Patients with Idiopathic Granulomatous Mastitis; Our Tertiary Center Results

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**Objective:** In this study, it was aimed to evaluate the response to oral prednol treatment in patients with idiopathic granulomatous mastitis (IGM).

**Material and Methods:** Twenty-one patients who were followed up prospectively and treated with oral prednol due to IGM in the General Surgery Clinic of Yüzüncü Yıl University Medical Faculty between September 2016 and November 2017 were included in the study. Their responses to the treatment were evaluated macroscopically and radiologically.

**Results:** The mean age of the patients was 35 years (min-max: 24-49). The onset of complaints was 10.9 months (1-60) on average; 5 patients were smokers, and the mean number of children was 3.0 (0-10). The localization was in the right breast in 15 patients, in the left breast in 5 patients and it was bilateral in 1 patient. The main symptom was mass and pain, and 7 patients had fistula on the skin. The average length of time to cease breastfeeding was 3.6 years (0-10). The diagnosis was made with tru-cut biopsy in 13 patients, with excisional biopsy in 5 patients, and with abscess drainage and incisional biopsy in 3 patients. The microbiological tests were negative in all patients. The PAS, EZN and Giemsa stains examined in the pathological piece were negative. Prednol tablet at a dose of 32 mg/day was used along with one-week cephalosporin group antibiotic treatment in 14 patients; the treatment was applied in 5 patients for the second time, and it was repeated for the third time in 2 patients.

**Conclusion:** Although IGM is a benign disease, it is a disease whose management is difficult for both the patient and the physician, and is a disease with high risk of recurrence. The use of prednol, whose treatment efficacy is shown in recent studies, has become a new hope for patients. As a result, prednol therapy provides improvements in patients' clinic, but does not give the desired result in some patients because the treatment protocol has not been fully clarified. We believe that there is a need for further studies in this regard.

**Keywords:** Mastitis, idiopathic granulomatous mastitis, granulomatous mastitis, prednol

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## OP-113 [Breast Diseases and Surgery]

# Simultaneous Breast Reconstruction with Permanent Prosthesis After Mastectomy

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**Objective:** In breast cancer, post-mastectomy reconstruction applications are of great importance and there are various options in the reconstruction operations that are currently performed. Patients who will undergo surgery with the diagnosis of breast cancer prefer concurrent reconstruction with permanent prosthesis instead of grafting from another part of the body or instead of two-session applications using tissue expanders. Simultaneous reconstruction applications have also been increasing with an accelerating trend since 2005.

**Material and Methods:** The analysis and results of 25 patients who underwent reconstruction with simultaneous permanent prosthesis due to the diagnosis of breast cancer between January 2016 and June 2017 are reported in this study.

**Results:** While mastectomy and sentinel node were performed in 11 of 25 female patients with a mean age of 45.5 (36-67), the axilla was negative, and the modified radical mastectomy with axillary dissection was performed in 9 patients. In 5 of the patients, only mastectomy was performed. Permanent prostheses with an average volume of 285.2 ml (180-365 ml) were simultaneously implanted behind the pectoral muscle in all patients. Nine of the patients underwent bilateral prosthesis application. The mean length of hospital stay was 4.0 days (1-7). Radiotherapy was applied to 28% of the patients after an average of 22 weeks postoperatively. Two (8%) patients had a wound problem, and the prosthesis was removed after 4 months because the wound of the patient with myasthenia gravis did not heal. In addition, the complications of infection in one patient, location change towards the lateral position in one patient, and capsular contractions in one (4%) patient undergoing radiotherapy were recorded. Twenty-four of the patients reported satisfaction with the outcome. In the histopathology; 14 patients had invasive ductal carcinoma, 1 patient had invasive lobular carcinoma, 1 had invasive cribriform carcinoma, 1 had mucinous carcinoma, 5 had DCIS and 3 had LCIS.

**Conclusion:** Despite the opposition of plastic surgeons suggesting that there may be high revision and complication rates, simultaneous breast reconstruction surgeries after mastectomy operations are performed with low complication rates by general surgeons considering the difficulties of the second operation and also the patients' wishes. Our results are also seen to be successful. We believe that these comfortable operations with low morbidity and high patient satisfaction will continue to increase in the next decade.

**Keywords:** Breast cancer, mastectomy, breast reconstruction, permanent prosthesis

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## OP-114 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)]

# Is the Use of Nasogastric Tube Necessary After Primary Repair in Peptic Ulcer Perforation?

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**Objective:** Surgery, which is the current treatment method for peptic ulcer perforation (PUP), is applied as an open surgery or in a laparoscopic way. Traditionally, primary repair is performed in PUP treatment and patients are followed up with nasogastric tube (NGT) in the postoperative period. The benefit of NGT after PUP has not been shown clearly, and there are few studies on the use of NGT. The aim of this study is to retrospectively compare the outcomes of the PUP patients in whom primary repair was performed and NGT was and was not used, and to question the necessity of using NGT which is frequently used today.

**Material and Methods:** The patients who were operated due to PUP in our clinic between 1999 and 2017 were retrospectively analyzed. Permission was obtained from the hospital ethics committee. Of the patients diagnosed with PUP and treated surgically, those in whom primary repair was performed using omentum were included in the study. The patients who underwent surgery due to malignancy, who underwent gastric resection, in whom definitive ulcer surgery (vagotomy and drainage) was performed, and in whom laparoscopic repair was performed were excluded from the study. There was no age limit for the analysis. Using NGT or not was decided according to the surgeon's preference. The patients with or without NGT were evaluated in terms age, gender, time of admission to the hospital, comorbidities, vital, laboratory and radiological findings, ASA, location and diameter of the defect, the number of drains, drain withdrawal time, onset of oral nutrition, length of hospital stay, mechanical ventilation requirement, and postoperative morbidity and mortality.

**Results:** Nine of the 298 patients who underwent total gastric gastrectomy or definitive ulcer surgery, 1 patient who underwent laparoscopic repair, and 46 patients in whom falsiform ligament was used instead of omentum were excluded. Of the remaining 242 patients, 53 patients with incomplete data were excluded and the remaining 189 patients were analyzed. The mean age of the patients was  $54.0 \pm 20.0$  (the median was 56 and the range was 16-95). There were no differences in terms of age, the time of admission, ASA scores, laboratory values, ulcer diameters and comorbidities when the groups with and without NGT were compared. It was observed that the use of NGT was more prevalent in the group with air under the diaphragm preoperatively ( $p=0.018$ ). When the patients were evaluated in terms of postoperative mortality, pexy leakage, ileus, wound-site complication, atelectasis and pneumonia, no difference was observed between the the groups in which NGT was and was not used. It was observed that oral feeding was started earlier in the patients of the group in which NGT was used than in the patients of the group in which it was not used (mean  $3.7 \pm 0.9$  vs  $4.3 \pm 1.4$ ,  $p=0.033$ ). The patients who did not use NGT were found to have shorter duration of hospitalization (mean  $6,6 \pm 3,1$  vs.  $8,1 \pm 3,8$ ,  $p=0,045$ ).

**Conclusion:** The belief that the paralytic ileus will resolve earlier with the discharge of the stomach contents through NGT leads to the routine use of NGT. It was determined in our study that the use of NGT did not provide any benefits for the patients in terms of pexy leakage, ileus development, and wound-site complication. We believe that the use of NGT should be reassessed because of its adverse effects on patient's oral intake and duration of hospitalization.

**Keywords:** Peptic ulcer, perforation, nasogastric tube, primary repair

## OP-115 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)] The Assessment of Complication, Locoregional Recurrence and Survival Rates in Patients in whom Enbloc Bursectomy was Performed Due to Gastric Cancer

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**Objective:** Gastric cancer is a cancer of the gastrointestinal system that has poor prognosis and aggressive course. Despite the recent developments in chemotherapy, radiotherapy and immunotherapy methods that are more current; surgical treatment of gastric cancer is still considered to be the most important treatment method. Bursa omentalis is one of the regions where this invasion and cellular spillage are found. It is thought that bursectomy to be performed for the cellular spillage into the bursa omentalis will contribute to survival especially in tumors located in the posterior of small curvature and going beyond serosa.

**Material and Methods:** Eighty-seven patients who were diagnosed with gastric adenocarcinoma and underwent R0 resection in our clinic between January 2009 and June 2016 were evaluated. After the patients who did not comply with the criteria were excluded, the study was continued with a total of 82 patients. The patients who were diagnosed with stomach cancer and operated were divided into two groups as 36 patients who underwent gastrectomy+D2 lymph node dissection+bursectomy and as 46 patients who did not undergo gastrectomy+D2 lymph node dissection+bursectomy. These two groups were compared in terms of morbidity, mortality and locoregional recurrence.

**Results:** It has been found that bursectomy does not statistically contribute to overall survival. However, when a time-based evaluation was made, it was determined that bursectomy contributed to survival with an additional 5 months. Bursectomy, started to be performed as a standard treatment method in eastern societies due to its low comorbidity rates, has not become a standard treatment method due to its high comorbidity in western societies.

**Conclusion:** Our study supports the Far East literature. However, in order to better evaluate the effects of bursectomy in stomach cancer especially in western societies, high-volume and broader studies are needed.

**Keywords:** Stomach cancer, bursa omentalis, bursectomy

## OP-116 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)] Our Experience in Gastrointestinal Stromal Tumors

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**Objective:** We aimed to evaluate the short and long term outcomes of the patients who underwent surgery in our clinic due to GIST.

**Material and Methods:** The demographic data, mortality and morbidity, pathologic results and long-term follow-ups of 164 GIST patients who were operated in our clinic between 2007 and 2017 were retrospectively reviewed.

**Results:** The mean age of the patients was 60,1 (19-84). Of the patients, 96 (59.2%) were male and 66 (40.8%) were female. While the tumor was located in the stomach in 82 (50%) of the patients, in the small intestine in 41 patients (25%), in the colorectum in 17 patients (10,3%) and in the esophagus in 2 patients (1,2%); 22 (13.5%) of them originated from the omentum and retroperitoneum. While tumor resection was performed in 106 (64.6%) patients, 58 (35.4%) patients had multiple organ resection. Early period mortality was observed in 1 (0.6%) patient, whereas morbidity was observed in 9 (5.4%) patients. The mean tumor diameter was 4.9 cm (1-42). The mitosis rate was 6.2 (1-50) on average at 50 magnification. The mean Ki-67 index was 12%. Sixty-one (37,1%) patients were in high-risk group, 49 (29,9%) were in moderate-risk group and 54 (32,9%) were in low risk-group. Imatinib therapy was started in the high-risk group patients after surgical intervention. Recurrence developed in twelve (7.3%) patients during their long term follow-ups. Liver metastasectomy was performed in 5 of these patients and mass excision in 3 of them. In 4 patients, spread liver and peritoneum were detected, and secondary surgical procedure was not performed. Mortality was seen in 11 (6.7%) patients in the long-term.

**Conclusion:** Despite the advances in pharmacotherapy, surgical resection is always the most important element of GIST treatment, and the total resection is still the most successful treatment method. With imatinib therapy, survival can be achieved in unresectable patients before surgery and post-operative long-term survival can be achieved in high-risk patients.

**Keywords:** Gist, surgery, imatinib

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## OP-118 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)] The Influence of Neutrophil Lymphocyte Ratio on Disease-free Survival and General Survival in Stomach Cancer and its Relation with Clinicopathological Data

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**Objective:** Neutrophil-lymphocyte ratio (NLR) is an inflammatory marker and is of prognostic importance for many cancers. In this study, we investigated the prognostic value of NLR ratio on stomach cancer and its association with clinicopathologic data.

**Material and Methods:** One hundred and ten patients who underwent surgery due to stomach cancer between 2012 and 2014 were retrospectively analyzed in electronic environment. Stage 4 patients, the patients who received neoadjuvant treatment, the patients who had emergency surgery and the patients who had infection preoperatively were excluded from the study. Peripheral blood samples were collected a week before the operation. The NLR ratio was obtained by dividing the absolute number of neutrophils by the number of lymphocytes. Age, gender, type of operation, pathologic result, tumor size, the total number of lymph nodes, the number of pathological lymph nodes, TNM stage (The 7th edition of the American Joint Committee on cancer), blood group, the number of white blood cells, hemoglobin levels, the number of platelets, and mpv, rdw, cea and ca 19-9 values of the operated patients were recorded and analyzed in the SPSS program. Disease Free Survival (DFS) and Overall Survival (OS) durations were calculated and the correlation of the NLR value with the clinicopathologic data of the tumor was examined.

**Results:** The mean follow-up duration was found to be 42 months in 110 patients included in the study. The mean age was found as 63.7±11.6 years. Of patients, 70% were male; total gastrectomy was performed in 43% of them and subtotal gastrectomy in 57%. Twenty-four percent of the tumors were located in the cardia, 19% in the corpus and 56% in the distal stomach, and the pathologic diagnoses of the tumors were reported as adenocarcinoma in 75%, signet-ring cell carcinoma in 19% and mucinous carcinoma in 3%. While the tumor size was found to be larger than 4 cm in 60% of the patients, 11% of the patients were stage 1,

29% were stage 2, and 60% were stage 3 according to TNM. Metastatic/excised lymph node ratio was below 0.3 in 59% of the patients. Neutrophil/lymphocyte rates were found to be greater than 2.5 in 50% of the patients and greater than 3 in 33% of them. The mean NLR value was found to be  $3.38 \pm 2.7$  (1.09-19.1). While NLR below 3 could not be demonstrated to have a significant effect, its value above 3 manifested itself as an effective factor on total survival.

**Conclusion:** In our study; while NLR was not detected as an effective factor on disease-free survival, it appeared as an independent factor affecting the total survival, together with stage, metastatic lymph node ratio, tumor size and localization. It has been concluded that NLR, which appears to be a significant factor in multivariate analyses, is an independent prognostic factor because it reflects the immune status of the organism, not the tumor aggressiveness or its stage.

**Keywords:** Gastric carcinoma, neutrophil lymphocyte ratio (NLR), disease free survival (DFS), overall survival (OS)

## OP-119 [Gastrointestinal System Surgery (esophagus, stomach, small intestine)]

# Intestinal Metaplasia and Helicobacter Pylori Rates in Operated Gastric Cancer Patients

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**Objective:** Stomach cancer is the second most common type of cancer in the world and it still has an important place among deaths due to malignant diseases. Helicobacter pylori infection and consequent intestinal metaplasia and hypochlorhydria give rise to a suitable environment for the development of stomach cancer in older ages. As a result of chronic inflammation, the intestinal-type epithelium is replaced by the stomach mucosa, and the acid secretion decreases and an environment suitable for the colonization of other bacteria is formed. These bacteria convert nitrates to nitrite to form the basis for cancer formation. In this study, we aimed to present the rates of intestinal metaplasia and Helicobacter pylori detected in gastric cancer cases in our clinic.

**Material and Methods:** One hundred and three patients operated with the diagnosis of gastric cancer between January 2013 and December 2017 were retrospectively evaluated in terms of demographic characteristics, surgical method, pathology results, intestinal metaplasia and Helicobacter pylori rates.

**Results:** Twenty-six of the patients included in our study were female and 77 were male. The ages of the patients ranged from 30 to 90, and the mean was 65.1. Total gastrectomy was performed in 48 patients and subtotal gastrectomy in 55 patients. Pathology results were divided as intestinal and diffuse types according to Lauren classification. Of the patients who underwent total gastrectomy, 28 were found to be intestinal type and 18 were diffuse type. In situ cancer metastasis was found in 1 case of this group and Hodgkin's lymphoma metastasis in another case. Intestinal metaplasia was found in two patients who underwent total gastrectomy and were reported to be diffuse type, and Helicobacter pylori positivity was found in 8 of them. Intestinal metaplasia was found in 24 patients who underwent total gastrectomy and were reported to be intestinal type, and Helicobacter pylori positivity was detected in 27 of them. Thirty-one of the subtotal gastrectomy cases were identified as intestinal type and 24 as diffuse type. Intestinal metaplasia was found in six patients who underwent subtotal gastrectomy and were reported as diffuse type, and Helicobacter pylori positivity was detected in 22 of them. Intestinal metaplasia was detected in 30 patients who underwent subtotal gastrectomy and were reported as intestinal type, and Helicobacter pylori positivity were detected in 30 of them.

**Conclusion:** The intestinal type of gastric cancer is more common in our region. Nearly all of the patients in this group were infected with Helicobacter pylori and had intestinal metaplasia. We think that early diagnosis and treatment of Helicobacter pylori infections with upper gastrointestinal endoscopy may prevent precancerous lesions such as intestinal metaplasia associated with this infection.

**Keywords:** Carcinoma, stomach, metaplasia, helicobacter pylori

## OP-121 [Obesity]

# The Metabolic Impact of Early Period Obesity on Patients

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**Objective:** In patients who underwent Laparoscopic Sleeve Gastrectomy (LSG) due to Morbid Obesity in our clinic; it was aimed to compare the weight loss follow-ups in the early period of obesity (adolescent period and before (APB)), adult period (AP) and post-operative long-term (at least 4 years), to observe whether or not the patients gained weight after LSG, and to examine the changes of comorbidities accompanying obesity.

**Material and Methods:** A total of 231 patients who were admitted to Pamukkale University Department of General Surgery with the complaint of morbid obesity and who underwent LSG as obesity treatment between January 2009 and January 2014 were included in the study. The patients underwent 1st, 3rd, 6th, and 12th months and later 4th year controls after surgery. They were divided into two groups as those in whom obesity started in the adolescent period and before, and as those who had normal weight before the adolescent period and gained weight in the adulthood.

**Results:** While the preoperative weight averages of 231 patients included in the study were  $141,61 \pm 27,93$  kg in the obese group of adolescent period and before (GAPB) (n=162), it was  $126,83 \pm 20,98$  kg in the adult group (AG) (p=0.0001). While BMI change was  $49.85 \pm 8.57$  preoperatively and  $32.49 \pm 5.62$  postoperatively for the group of GAPB, it was  $43.89 \pm 4.88$  preoperatively and  $26.33 \pm 2.57$  postoperatively for the group of AG. There were 26 patients in the group of GAPB and 4 patients in the group of AG, for whom revision was required, as of the 1st year (p=0.0001). Of the 90 patients with HT in the comorbidities, 75.6% were in the GAPB, whereas 60.5% of 76 patients with type 2 diabetes were in GAPB. The difference in terms of diagnosis, metabolic values and comorbidities was statistically significant in the preoperative and postoperative 4th year. None of the patients in the study group had any major complications or mortality during the follow-up period.

**Conclusion:** According to the results obtained, the rate of weight loss in AG was higher than that of GAPB, and the need for revision was less. We think that eating habits are an important factor since infancy and it is very important to prevent obesity at early ages.

**Keywords:** Bariatric surgery, morbid obesity, adolescent period

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## OP-122 [Obesity]

# The Comparison of Microvessel Density of Gastric Areas in Normal and Sleeve-Gastrectomized Rats

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**Objective:** The aim of this study is to compare the microvessel density of the different regions of the sleeve gastrectomized rats and to determine the effect of the sleeve gastrectomy on the microvessel density of the tissues throughout the healing line of the remaining stomach incision area.

**Material and Methods:** Twenty male Wistar albino rats were divided into two groups. Through sleeve gastrectomy under anesthesia, full-thickness wedge resection from the esophagogastric junction, fundus, corpus and antral regions was performed in the rats of control group. Sleeve gastrectomy was performed in the rats of the experimental group. On the postoperative 5th day, gastric tissues adjacent to the sleeve gastrectomy incision surface area were excised in the form of a wedge. The microvessel density of the groups was assessed and compared.

**Results:** There was no significant difference between the microvessel density of esophagogastric junction in the control and experimental groups ( $20.04 \pm 4.45$ ,  $24.63 \pm 8.91$ ,  $p > 0.05$ ). The microvessel density of the esophagogastric junction in the control group was found to be less than that of the corpus and fundus (18.8; 32.7, 37.0;  $p < 0.01$ ). After sleeve gastrectomy, there was no difference between the microvessel densities of esophagogastric junction and the corpus (24.2, 20.4;  $p > 0.05$ ), but it was higher than that of the antrum (24.2, 13.8;  $p < 0.05$ ).

**Conclusion:** The leakage of sleeve gastrectomy incision line is an unavoidable complication. The place of leakage is frequently seen in the upper part of the sleeve gastrectomy incision surface adjacent to the esophagogastric junction. Successful wound healing depends on angiogenesis. The distribution of stomach bleeding that remains after sleeve gastrectomy varies. MVD measurement is used to investigate angiogenesis. In this study, it was observed that there was no significant difference between the microvessel densities of esophagogastric junction of normal or sleeve gastrectomy groups. Sleeve gastrectomy has no effect on the microvessel density of the gastric areas adjacent to the esophagogastric junction.

**Keywords:** Sleeve gastrectomy, microvessel density, esophagogastric junction



## OP-123 [Obesity]

## Is ASA Inadequate in Predicting Mortality in Patients in whom Sleeve Gastrectomy is Performed? OS-MRS Results of 1107 Cases

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**Objective:** Obesity that is becoming widespread and one of the important health problems in the world is a preventable health problem. Prediction of mortality before surgery is important both for the patient to be informed and for the team to be able to review the treatment decision again. The Obesity Surgery Mortality Risk Score (OS-MRS) system, which is used to determine the risk of mortality in obesity surgery, is useful in predicting mortality. The ASA classification (American Society of Anesthesiologists) is widely used to evaluate preoperative mortality. However, most bariatric patients are in the category of ASA II or III. In this case, the mortality rate is 0.27-0.4% for ASA II and 1.8-4.3% for ASA III. ASA, however, can not distinguish the individual or comorbid diseases that bariatric patients may have. In addition, the scoring of an important parameter such as BMI alone overscores in the ASA scoring system, regardless of additional diseases. In this case, the patient group with a BMI greater than 40 is considered to be ASA III regardless of additional diseases. In this sense, ASA is inadequate in predicting mortality risk in morbid obesity.

We aimed to evaluate the efficacy of OS-MRS in mortality in ASA III morbid obesity patients as a subgroup.

**Material and Methods:** The LSG operations performed at Bakırköy Dr. Sadi Konuk Training and Research Hospital between the dates of 2014 and 2018 were retrospectively reviewed. OS-MRS classification was performed by determining the demographic characteristics, body mass indexes (BMI), accompanying diseases and thromboembolic risk factors (pulmonary hypertension, sleep apnea syndrome, deep vein thrombosis and vena cava infiltration). ASA classification was made according to the presence and severity of additional illness. According to OS-MRS classification; the absence of the parameters of male gender, age above 45 years, BMI>50 k/m<sup>2</sup>, risk of thromboembolism and hypertension was scored as 0 and the presence of the above parameters was scored as 1. Those with 0-1 points were determined as Class A, with 2-3 points as Class B and with 4-5 points as Class C.

**Results:** A total of 1107 patients who were ASA III and underwent laparoscopic sleeve gastrectomy were included in the study. In the subgroup evaluation; the mortality distribution among the groups was found as follows, respectively; Group A: 2 patients in 725, Group B: 2 patients in 361, and Group C: 1 patients in 21. The rates of mortality according to OS-MRS were 0.2% in Group A, 0.5% in Group B and 4.7% in Group C.

**Conclusion:** According to the ASA guidelines, the mortality rate in the morbid obesity surgery was found to be 1.3% – 4.8% in the group of ASA III. The rates of mortality according to OS-MRS classification in Groups A and B were lower than ASA with 0.2-0.3%, 1.2-1.9%, respectively, and consistent with our results. However, only Group C appears to be consistent with ASA.

**Keywords:** ASA, mortality, OS-MRS, sleeve gastrectomy

## OP-124 [Obesity]

## The Metabolic Effects of Laparoscopic Sleeve Gastrectomy in Morbidly Obese Patients

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**Objective:** Today, obesity is one of the most important health problems with increasing frequency in recent years and with the health problems it brings, and because it decreases the quality and duration of life. Although various methods to combat obesity such as diet, exercise, lifestyle changes, and medical treatments are implemented, sufficient success has not yet been achieved. It is known that obesity leads to comorbid diseases such as diabetes, hypertension, cardiopulmonary disease, polycystic ovary disease, which increase mortality. The surgical techniques, in which the morbidity and mortality rates gradually decrease as the frequency of application increases, have become more preferable. The number of bariatric surgical procedures implemented between 1998 and 2003 increased from 13,000 to 103,000. Laparoscopic Sleeve Gastrectomy (LSG) is becoming an increasingly applied technique due to its ease of application and effective results. In this study, we aimed to investigate the metabolic changes in patients in whom LSG was performed.

**Material and Methods:** This study was performed between January 2013 and August 2016 in the 1<sup>st</sup> General Surgery Clinic of İzmir Tepecik Training and Research Hospital. The prospectively collected data of 164 of a total of 225 patients who underwent

Laparoscopic Sleeve Gastrectomy due to morbid obesity and who regularly attended the control follow-ups in the 1st, 3rd, 6th and 12th months were retrospectively analyzed.

**Results:** One hundred and sixty-four patients who underwent LSG were included in the study. Of the patients, 142 were female (86.6%) and 22 were male (13.4%). The mean age was found to be 36.6 (19-59) years. The mean height of the patients was 164 cm (150-187), the average weight was 122.7 kg (91-184) and the mean BMI was 45.5 kg/m<sup>2</sup>. The patients were followed up for an average of 27.5 months. It was observed that patients lost a significant amount of weight on the basis of EBWL. It was observed that they lost 48.5% of the weight they were required to lose on average in the 3<sup>rd</sup> month, 67.1% in the 6<sup>th</sup> month and 83.7% in the 12<sup>th</sup> month. While 36 patients were treated due to Hypertension (HT) in the preoperative period, HT totally regressed in the 12<sup>th</sup> month in 22 patients and the antihypertensive need was eliminated. While 27 patients were treated due to Type 2 Diabetes Mellitus (DM) in the preoperative period, DM totally regressed in the 12<sup>th</sup> month, and the use of Oral Antidiabetic (OAD) and insulin was ended. While 118 patients was diagnosed with metabolic syndrome in the preoperative period, this number decreased to 29 in the 6<sup>th</sup> month and to 11 in the 12<sup>th</sup> month.

**Conclusion:** The fact that patients are diagnosed with metabolic syndrome at a very high rate suggests that there will be irreparable damage in multiple organs at an early age. This study and other studies in the literature show that LSG is a very effective procedure on the metabolic syndrome. Due to its ease of application, low risk of complications, rapid and effective weight loss and its metabolic healing effect; the frequency and popularity of the application is gradually increasing. As LSG-related long-term outcomes are published in the literature, surgeons will become even stronger in the fight against metabolic syndrome and obesity.

**Keywords:** Laparoscopic sleeve gastrectomy, metabolic syndrome, morbid obesity

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## OP-125 [Obesity]

# Our Sleeve Gastrectomy Technique and Results in the Presence of Hiatal Hernia and GERD

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**Objective:** Gastroesophageal reflux disease and hiatal hernia are comorbidities of obesity. More than 40% HH was found in the preoperative EGD of the patients to undergo bariatric surgery. Many factors such as intra-abdominal pressure increase, esophageal shortening secondary to chronic Gastroesophageal reflux disease and congenital abnormalities in the Lower Esophagus Sphincter can contribute to the development of hiatal hernia. Simultaneous sleeve gastrectomy and Hiatal hernia repair at appropriate times reduce the symptoms considerably.

**Material and Methods:** Sleeve gastrectomy procedure was performed in 1470 patients with morbid obesity between January 2013 to September 2017. Simultaneous sleeve gastrectomy and hiatal hernia repair were performed in 122 (8.2%) patients. The patients with hiatal hernia and associated symptoms were repaired simultaneously as in an extracorporeal way or in an intracorporeal way. Basic characteristics of the patient, body mass index (BMI), body weight change and the duration of operation were analyzed. All patients received proton pump inhibitor therapy for 2 months. The patients with persistent gastroesophageal symptoms were reevaluated with upper GI endoscopy.

**Results:** Simultaneous sleeve gastrectomy and hiatal hernia repair were performed in 122 patients. The mean body mass index was 43.2 kg/m<sup>2</sup>. The mean age was 36.5 years. Of the patients, 84 were female and 38 were male. The mean duration of the operation was 65 min. The patients lost an average of 80% of their excess weight. Roux-n-y gastric bypass procedure was performed in two patients with ongoing gastrointestinal symptoms.

**Conclusion:** The procedure of the sleeve gastrectomy in the presence of hiatal hernia and gastroesophageal reflux is a highly controversial issue and is not recommended by some authors, but successful results with hiatal hernia repair and simultaneous sleeve gastrectomy have been reported in the literature. Simultaneous sleeve gastrectomy and hiatal hernia repair are considered to be an appropriate treatment option in the treatment of morbidly obese patients with hiatal hernia.

**Keywords:** Hiatal hernia, sleeve gastrectomy

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## OP-126 [General Surgical Diseases]

# The Repair Results with Resection and Mesh in Patients with Peritoneal Carcinomatosis and Diaphragm Involvement

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**Objective:** Hyperthermic intraperitoneal chemotherapy (HIPEC) along with cytoreductive surgery (CRS) has been being performed increasingly in our country in recent years. If there is diaphragm involvement in patients who are treated with CRS+HIPEC, stripping (stripping of the diaphragm) is preferred first. However, diaphragmatic resection is recommended in cases where the diaphragm can not be stripped and there is full-thickness diaphragm involvement. In this study, we aimed to share the experience we gained by examining the early results of our patients in whom we performed diaphragmatic resection and mesh repair surgery in our clinic.

**Material and Methods:** We retrospectively reviewed the files of 44 patients who underwent CRS+HIPEC in our hospital between January 2017 and January 2018 and evaluated 8 patients who underwent diaphragm resection in detail. The demographic information, preoperative diagnoses, surgical techniques applied and early results of the patients were reviewed.

**Results:** The mean age of 8 patients (4 female, 4 male) with full-thickness diaphragm involvement was 54.5 years (range, 39-61). The primary pathology of the patients was colorectal carcinoma (n=2, 25%), serous ovarian carcinoma (n=2, 25%), sarcomatosis (n=2, 25%), and mesothelioma=1, 12.5%). Six (75%) of these patients received neoadjuvant chemoradiotherapy. Optimal CRS procedure was performed in the patients during the operation. While partial diaphragm resection and primary raphy were performed in 5 (62.5%) of these patients, the remaining 3 patients (37.5%) underwent wider resection; the composite dual mesh (GORE Dualmesh Biomaterial, Arizona, USA) repair was performed because of the large diameter of the defect. While 2 inflow and 2 outflow drains were placed in 5 patients in whom primary raphy was applied in the diaphragm; in the other 3 patients in whom mesh was placed, 2 inflow drains in the abdomen, one outflow drain in the thorax and one outflow drain in the abdomen were placed. Oxaliplatin 300 mg/m<sup>2</sup> (body surface area, BSA) in 5% dextrose was intraperitoneally injected in colorectal tumors at 42-43 °C for 30 minutes, and 5-fluorouracil (FU) 400 mg/m<sup>2</sup> BSA+leucovorin 20 mg/m<sup>2</sup> BSA was given intravenously. Cisplatin 75 mg/m<sup>2</sup> BSA+doxorubicin 15 mg/m<sup>2</sup> BSA in %9 NaCl solution was intraperitoneally administered for 60 minutes in patients with ovary, sarcomatosis, mesothelioma, and stomach carcinoma. The fluid passing from the mesh area to the thorax was drained through this drain. No lung complications were seen in 5 patients who underwent primary raphy. While 2 of the patients who underwent mesh procedure were discharged on the 10th day without any postoperative complications, one patient received medical treatment due to the development of pneumonia, and was extubated on the 45th day.

**Conclusion:** Safe surgical margin resection and composite dual mesh repair can be performed in the CRS+HIPEC patients who have peritoneal carcinomatosis, full-thickness diaphragm involvement, and in whom stripping is not possible. In these patients, the abdominal lavage fluid should be evacuated by placing drain in the thorax without harming the lungs.

**Keywords:** Peritoneal carcinomatosis (PC), cytoreductive surgery (CRS), hyperthermic intraperitoneal chemotherapy (HIPEC), diaphragm, mesh

**OP-127 [General Surgical Diseases]****The Comparison of Crystallized Phenol and Platelet Rich Plasma Treatments in Pilonidal Sinus Therapy****Barış Sevinç, Nurullah Damburacı, Ömer Karahan***Department of General Surgery, Uşak University School of Medicine, Uşak, Turkey*

**Objective:** In the treatment of pilonidal sinus disease, many different techniques are still applied all over the world. Despite the fact that surgical flap methods are the most accepted methods today, the search for minimally invasive procedures in the treatment of the disease continues. Crystallized phenol is successfully applied in many centers as a non-surgical treatment method. Platelet rich plasma (PRP) has been used in a wide variety of fields in recent years. There are many clinical trials asserting the accelerator effect of PRP on wound healing. The use of PRP in the treatment of pilonidal sinus is frequently performed in our clinic, although it has not yet reached an adequate prevalence. The aim of this study is to compare the efficacy of PRP and crystallized phenol applications, which are non-operative treatment methods, in the treatment of pilonidal sinus disease.

**Material and Methods:** The patients in whom PRP or crystallized phenol was administered due to pilonidal sinus disease were included in the study. Both are applied in our clinic as standard methods, and pre-procedural examination findings and post-procedural follow-ups of the patients are recorded prospectively. The demographic data of the patients, the treatment method applied, the number of sessions performed, the duration of recovery and follow-up were obtained from the data in files. The data obtained were analyzed using the IBM SPSS 22.0 statistical program.

**Results:** A total of 108 patients were included in the study. The number of patients in the groups was found to be equal. The groups were found to be similar in terms of age, gender and body mass index. When the pit numbers of the patients were evaluated before the procedure, it was found that there were an average of 1.9±0.8 pits and there was no difference between

the groups. It was found that pilonidal sinus abscess previously developed in a total of 19.4% of patients and drainage was performed. The groups were found similar in terms of abscess development. While an average of  $1.03 \pm 0.1$  applications were performed in the patients of PRP group, this number was found as  $1,6 \pm 0,8$  in the phenol group. The number of applications in the phenol group was significantly higher. While the mean duration of recovery was found as  $7.1 \pm 2.3$  days in the PRP group, it was  $12.5 \pm 7.3$  days in the phenol group. The mean duration of recovery was significantly longer in the phenol group. The mean follow-up period in the study was 17.08 months, but no difference was found between the groups. The rates of recurrence were 9.3% in the PRP group and 20.4% in the phenol group. There was no statistical difference between recurrence rates.

**Conclusion:** According to our current study, the duration of recovery and the need for administration is significantly lower in PRP treatment than that in crystallized phenol application. It has also been found to be similar to crystallized phenol application in terms of recurrence. In the light of the data obtained in the study, PRP administration offers promising results in the treatment of pilonidal sinus.

**Keywords:** Pilonidal sinus, platelet rich plasma, phenol

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## OP-128 [General Surgical Diseases]

# The Comparison of Primary Repair, Limberg Flap Technique and Karydakis Surgery in Pilonidal Sinus Surgery

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**Objective:** Pilonidal sinus is a common chronic disease of the sacrococcygeal and natal region. There are many surgical treatment options for the treatment of pilonidal sinus disease. There is still no consensus on the ideal surgical procedure. For this purpose, we compared the results of our pilonidal sinus patients treated with primary repair, limberg flap repair and karydakis flap repair.

**Material and Methods:** We retrospectively reviewed the data of 924 pilonidal sinus patients who were operated in our clinic between December 2013 and December 2017. Demographic data of the patients, surgical procedures performed, operation schedules (after abscess drainage/elective) and whether or not there was recurrence were examined.

**Results:** The mean age of the patients was 28.4 (14-77), 82.5% of them were male (n: 762) and 17.5% were female (n: 162). Primary repair was performed in 53.7% (n: 496) of 924 patients, limberg flap in 32.5% (n: 300) and karydakis procedure in 13.9% (n: 128). It was observed that 91% (n: 841) of the patients underwent surgery for the first time (primary) and 9.3% (n: 83) of them had undergone surgery previously (recurrence). Surgery was performed in 9.3% (n: 86) of the patients along with acute pilonidal abscess drainage and it was performed 3 weeks after elective surgery, that is, pilonidal abscess drainage in 1.6% (n: 15). Eighty-nine percent of the patients (n: 822) were found to have undergone surgery in the chronic period. It was found that primary repair operation was in the first place, limberg flap was in the second place, and karydakis was in the third place in female patients. In recurrent patients, limberg flap repair was the first to be preferred, primary repair was the second, and karydakis surgery was the third. When recurrence rates were examined (n: 83), it was seen that the patients with the most recurrences had primary repair (n: 44). The least recurrence was found in patients who underwent karydakis surgery (n: 15). Recurrence was detected after limberg flap repair in 24 patients.

**Conclusion:** Considering the results of the study, we think that the reason why primary repair is performed mostly in female patients is the cosmetic concerns. As a result, primary repair remains valid as a current treatment method for many surgeons. However, when the recurrence rates are examined, it should not be forgotten that recurrences related to inadequate excision performed are mostly detected in primary repairs. It is clear that definitive surgeries performed have an important role in recurrences under acute infective conditions. Therefore, we suggest that it will be a more accurate choice to perform sinus excision in another session after inflammation has subsided following the abscess drainage. Considering the low recurrence rates in recurrent cases, limberg flap or karydakis surgery should be remembered first. When low recurrence rates, patient comfort and cosmetic results are evaluated together, karydakis surgery appears to be a preferred method.

**Keywords:** Pilonidal sinus, surgical technique, primary repair, limberg flap, karydakis

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## OP-129 [General Surgical Diseases]

# The Comparison of Primary Repair Technique with V-Y Advancement Flap Technique in the Surgical Treatment of Pilonidal Sinus

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**Objective:** Pilonidal sinus disease is one of the most problematic issues of surgery. Although different surgical treatment methods have been defined, there is no 'ideal' method due to postoperative morbidity and low patient comfort. In this study, we compared the patients in whom primary repair technique and V-Y advancement flap were performed for the surgical treatment of pilonidal sinus.

**Material and Methods:** We retrospectively examined 189 patients who underwent primary repair technique or V-Y advancement flap technique due to pilonidal sinus between January 2014 and December 2016 in Tekirdağ Çorlu State Hospital and in the Medical Faculty of Namık Kemal University. The data of these patients were recorded in a specially prepared database and evaluated.

**Results:** Of 189 patients who were operated due to pilonidal sinus, 156 (82.54%) were male and 33 were (17.46%) female. Of the 100 patients who underwent primary repair technique, 81 (81%) were male and 19 (19%) were female patients (Group I). Of the 89 patients who underwent V-Y advancement flap technique, 75 (84.27%) were male and 14 (15.73%) were female patients (Group II). The mean age was 27.65 (16-49) in Group I, and 26.21 (17-63) in Group II; the mean duration of complaints was 22.1±11.1 (6-60) months. Fifteen patients with recurrence were treated with V-Y advancement flap technique, and V-Y flap was performed in 25 of 40 patients who had abscess drainage in their anamnesis and primary closure was performed in 15 of them. V-Y was performed in 19 of 28 patients with complicated fistulae, and primary repair was performed in 9 patients. The patients in both groups were followed up for 1-45 months. The mean follow-up duration was 36.54 months in the V-Y advancement flap and 31.56 months in the primary closure. The surgery duration was 21.7 min. on average in the primary repair technique and 43.3 min. in the V-Y advancement technique. The mean duration of hospitalization in both groups was 1 day. Seroma was observed in 8 patients (8%) in Group I, and in 1 patient (1.12%) in Group II. In Group I, wound infections occurred in 10 (10%) patients and in 1 (1.12%) patient in Group II. In Group I, 6 (6%) of the patients had wound dissociation. In Group I, recurrence was seen in 12 patients (12%). In group II, recurrence was seen in 3 patients (3.37%). The duration of recovery was 16.34 days in Group I and 14.28 days in Group II.

**Conclusion:** There is no consensus on a treatment method for pilonidal sinus disease. Alternative methods are searched for in the treatment of pilonidal sinus because the intergluteal sulcus can not be flattened, there is high tension between the wound lips, there are many postoperative problems, and there is a high recurrence rate in the primary repair method. V-Y advancement flap, which is one of these methods, leads to fewer postoperative problems in comparison to the primary repair method because the intergluteal sulcus can be flattened and there is no tension between the wound lips. It can be an alternative treatment method for pilonidal sinus due to the fact that it is easily applicable and tissue necrosis is not observed because there is no free tissue flap.

**Keywords:** Pilonidal sinus, V-Y flap, wound

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## OP-130 [General Surgical Diseases]

# The Use of Three Dimensional Modeling and Printing in Laparoscopic Surgery

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Especially in the last quarter of the century; the rapid development of healthcare industry, better understanding of the anatomy, surgeons aiming for greater benefits with fewer incisions and increasing demands of the patients for fewer incisions have led to great strides in minimally invasive surgical techniques. Minimally invasive surgical technique in many different branches has become a gold standard today. Despite all these developments, restraints on the application of minimally invasive surgical techniques in some challenging cases push surgeons into different pursuits. In addition to this; as a result of the ease of access to information and the increased awareness of patients about surgical treatment options, the development of classic minimally invasive surgical techniques necessitate surgeons and other disciplines to collaborate. In recent years, advances in imaging techniques have led to a more detailed anatomical review, and real-like three-dimensional structurings have led to a shift to a different dimension in the field of surgery. Further pre-operative mapping and navigation of the lesions can be achieved with real-like three-dimensional imaging. Thanks to the further development of 3D printers that have been used for many years in the industry and the combination of 3D imaging and 3D printing, it is possible to make minimally invasive surgical procedures relatively easy in difficult situations. In our

clinic, a paraganglioma with aorto-caval location in the retroperitoneal region was treated with this technique. Although atypical and difficult localization of the mass led to many difficulties in terms of surgical technique, access to mass, and patient position; three-dimensional reconstruction of a computerized tomography image and the provision of a real-like printout with a 3D printer made a significant contribution to the successful completion of the surgery laparoscopically. It was possible to map the localization of the mass in this way, to explain the difficulty of the case to the patient in a concrete way preoperatively, to determine the patient position, and to determine the navigation and dissection plan. We believe that improving the three-dimensional imaging and printing technique and using it more widely especially in difficult cases in the clinic will be a significant contribution to informing the patient before the surgery, developing the surgical strategy and to surgical training.

**Keywords:** Three-dimensional printing, three-dimensional imaging, laparoscopic surgery, minimally invasive surgery, render

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## OP-131 [Surgical Area Infection, Surgical Intensive Care]

# The Results of Negative Pressure Closure System in Intensive Care Unit

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**Objective:** Today, surgical negative pressure closure (VAC) systems are frequently used in various wound types and to form a system closed to external environment (1). We wanted to share our experience with patients in whom VAC system was applied in our general surgery clinic and who were followed up in our intensive care unit.

**Material and Methods:** Following the ethics committee approval, the files of the patients who were admitted to intensive care unit and in whom VAC was used between 2012 and 2017 were retrospectively reviewed. The patients who were under 18 years of age and followed up less than 48 hours in intensive care unit were excluded from the study. Patient demographic data, discharge patterns, length of hospitalization, reproductions, tracheostomy needs, hemodiafiltration needs, APACHEII and SOFA scores at the time of the discharge from the hospital were recorded. The SPSS16.0 program was used for the statistical analysis of the study.

**Results:** A total of 4880 patient files were reviewed in 5 years. It was found that VAC had been applied in 123 patients. Seventeen patients were excluded from the study because they died within the first 48 hours. Of the remaining 106 patients, 59 were male (56%), and 47 were female (44%); the mean age was determined as  $77 \pm 15.5$  years. While 83 patients (78%) died, survival was provided in 23 patients (22%). While the mean age of the lost patients was  $63.9 \pm 14.7$  years, it was  $55.3 \pm 19.6$  years in those who survived, and the difference was statistically significantly low. Continuous renal replacement therapy was performed in 61 of 106 patients (58%), and 40 patients (38%) died. The reasons for the establishment of VAC were contaminated abdomen in 87 (82%) in the first place, increased abdominal pressure in 16 (15%) in the second place, and necrotizing fasciitis in 4 (3%) in the third place. While there was no reproduction in 17 patients (16%), gram negative pathogen was found in 51 patients (48%), yeast in 30 patients (28%) and gram positive pathogen in 8 patients (8%). When Apache II and SOFA scores were examined; the admission and discharge scores of the patients who died were found to be statistically higher than those of the surviving patients. In addition, it was determined that the length of stay in intensive care unit in patients who died was statistically significantly shorter than in those who survived.

**Conclusion:** The use of VAC allows the drainage of the secretion to prevent contamination, thereby allowing the protection of the surgical site or wound site with the development of healthy granulation tissue. However, we believe that it will have a positive effect on mortality and morbidity with an accurate timing.

Predisposing factors could not be monitored in mortalities because it was planned as a retrospective study. It could not be documented whether or not the comorbidity factors were related to VAC application. A prospective study related to these limitations is being planned.

**Keywords:** VAC system, intraabdominal sepsis, surgical field infection

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## OP-132 [Transplantation]

# Does Gastroduodenal Artery Ligation Performed due to Arterial Steal Syndrome in Living Donor Liver Transplantations Lead to Complications in Duct to Duct Biliary Anastomosis?

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**Objective:** We investigated whether Gastroduodenal artery ligation led to long-term biliary complications due to arterial steal syndrome, which was recognized during hepatic artery reconstruction in living donor liver transplantations.

**Material and Methods:** This is a retrospective cohort study. The patients who underwent living donor liver transplantation (LDLT) between June 2000 and June 2017 in the General Surgery Liver Transplantation Unit of Dokuz Eylül University Faculty of Medicine, who were older than 18 years old and who had a survival for at least 6 months were included in the study. In our study; the demographic data, the required graft weight/current graft weight ratio, cold ischemia times, Child and MELD scores, immunosuppressive agents used and blood therapeutic levels and whether or not biliary tract complications occurred during the follow-up after the operation were reviewed in the patients who underwent Gastroduodenal artery ligation due to arterial steal syndrome.

**Results:** Between June 2000 and June 2017, 240 LDLTs were performed and 11 (4.5%) cases were diagnosed with Gastroduodenal artery steal syndrome through Doppler Ultrasonography during hepatic artery reconstruction. After the diagnosis of arterial steal syndrome was confirmed by demonstrating the increased hepatic artery flow rate and outflow in the Doppler Ultrasonographic controls performed by attaching vascular artery clamp in the Gastroduodenal artery, gastroduodenal artery ligation was performed for treatment. Seven (63.6%) of the patients were male and 4 (36.4%) were female. Biliary duct anastomoses of the 11 patients with gastroduodenal artery stealing syndrome were duct to duct anastomosis in 8 (72.7%) patients and Roux-en-Y Hepaticojejunostomy in 3 (27.3%) patients. As for the distribution of transplantation indications of these patients; 4 were Hepatitis B (HBV)+Hepatitis D, 2 were HBV, 2 were HBV+Hepatocellular carcinoma, 2 were cryptogenic, and 1 was Hepatitis C (HCV). The BMI was found as  $24.7 \pm 3.56$ , mean age was  $42.7 \pm 8.6$ , and the duration of cold ischemia was  $74 \pm 18.4$  in the 11 patients in whom gastroduodenal artery ligation was performed. The average follow-up duration was 3260 (371-4357) days. It was observed that none of the 11 patients who underwent duct to duct biliary duct anastomosis had biliary duct complications in long-term follow-ups ( $p < 0.001$ ).

**Conclusion:** Gastroduodenal artery ligation can be performed safely in cases with the diagnosis of steal syndrome between hepatic artery and gastroduodenal artery during hepatic artery reconstruction in LDLTs.

**Keywords:** Gastroduodenal artery ligation, duct to duct anastomosis, liver transplantation

## OP-133 [Transplantation]

# The Comparison of the Thrombectomy Results in Patients with Portal Vein Thrombosis who Underwent Cadaveric or Living Donor Liver Transplantation

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**Objective:** Portal vein thrombosis (PVT), especially at advanced grades, is still accepted as a relative contraindication in many transplantation centers. PVT is more controversial, especially in living donor liver transplantation (LDLT), due to the serious surgical technique and the risks of morbidity. The incidence of PVT is 7-17% in end-stage liver disease. The shortage of cadaveric donor donation in our country necessitates living donor transplants also in PVT patients. The results of PVT patients at different grades in whom liver transplantation was performed in our clinic and portal vein flow was obtained after thrombectomy.

**Material and Methods:** Between January 2014 and December 2017, 514 patients underwent liver transplantation. The demographic data of PVT patients, their grades according to Yerdel classification, applied surgical procedures, postoperative portal vein statuses, morbidity and mortality were recorded. The results of the patients who underwent thrombectomy were compared in terms of whether they were LDLT or CDLT.

**Results:** Living donor liver transplantation (LDLT) was performed in 331 patients (64.4%) and cadaveric donor liver transplantation (CDLT) was performed in 183 patients (35.6%) during the study period. Of the patients, 181 were female (35,2%) and 333

(64,8%) were male. The average age was 51.2 (6 months-71 years). PVT was detected in 55 patients (10.7%). According to the Yerdel classification; 1st, 2nd, 3rd and 4th grade PVT was detected in 5 (9%), 28 (51%), 12 (22%) and 10 (18%) patients, respectively. While thrombectomy was successful in one of the 10 patients with fourth degree PVT, extra-anatomic portal venous anastomosis was required in 9 patients (16%). A total of 46 patients (84%) underwent portal vein anastomosis after thrombectomy. LDLT was performed in 29 patients (63%) who underwent thrombectomy and CDLT was performed in 17 patients (47%). These two groups were compared in terms of early and late re-thrombosis and effective portal flow. In the postoperative 1st day, re-thrombosis developed in one patient in the CDLT group and in two patients in the LDLT group in which thrombectomy was performed ( $p=0.06$ ).

**Conclusion:** PVT still presents difficulties especially with the necessity of a preoperative evaluation and surgical strategy in patients who are scheduled for LDLT. In cadaveric transplants, a long portal vein of the graft enables to achieve a healthy portal vein area by shortening the portal vein segment to which thrombectomy is applied in the recipient; however, there is an anastomosis necessity in the field where thrombectomy is performed since this is not possible in the transplantations performed from living donors. In our study, no difference was detected in the short and long term results of the patients who underwent thrombectomy due to PVT and in whom LDLT and CDLT were performed. Except for grade 4, LDLT can be performed with reliable results when an effective surgical technique is applied after correct preoperative preparation in the presence of PVT.

**Keywords:** Portal vein thrombosis, liver transplantation, living donor

## OP-134 [Transplantation]

# Is The Elevated Blood “Eosinophil” Count A Valuable Biomarker of Late-Onset Acute Rejection (LAR) After Liver Transplantation?

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**Objective:** The rejections seen after the 6th month of living donor liver transplantation (LDLT) are defined as “late-onset acute rejection” (LAR). Liver biopsy is still the gold standard in these cases. During the follow-up periods of liver transplant patients, liver biopsies are performed in order to make definitive diagnosis when the liver function tests suggest elevated LAR. However; given the morbidity and complications caused by this biopsy, can the elevated blood eosinophil counts, a noninvasive method, be used as a predictive biomarker in the determination of LAR?

**Material and Methods:** The patients who underwent living donor liver transplantation (LDLT) between June 2000 and June 2017 in the General Surgery Liver Transplantation Unit of Dokuz Eylül University Faculty of Medicine, who were older than 18 years old and who had a survival for at least 6 months were included in the study. The demographic data, required graft weight/current graft weight ratio, cold ischemia times, Child and MELD scores, the doses of immunosuppressive agents before the rejection, blood therapeutic levels and the comorbidities were examined in the patients in whom late-onset acute rejection developed. In our study, we investigated the pathologic results of liver biopsies of the patients suspected to have LAR, and it was investigated whether or not the retrospective examination of the blood samples before the biopsy and the examination of the elevated blood eosinophil values had an effective role on the diagnosis of LAR.

**Results:** Considering the rejection due to the elevated liver function tests during the follow-up; liver biopsy was performed in 65 (26.9%) of 240 liver transplant patients who were included in the study. While LAR was detected in 28 (44.4%) transplant patients whose biopsies were done, 35 (55.6%) patients were not found to have any signs of rejection. As for the rejection distribution of the patients who were diagnosed with rejection according to Banff pathology scoring, 10 (35.7%) were mild, 13 (46.4%) were moderate and 5 (17.9%) were severe. Twenty-one (75%) of the patients were male and 7 (25%) were female. The average follow-up duration was 3056 (184-4877) days. The mean time of liver biopsy was postoperatively 660<sup>th</sup> (180-4354) day. There was a statistically significant relationship between the number of elevated blood eosinophils and the development of LAR in blood laboratory values before biopsy ( $p<0.001$ ).

**Conclusion:** In the diagnosis of LAR, which may occur during the follow-ups of living donor liver transplantation; elevated blood eosinophil values, a noninvasive method compared to liver biopsy, can be used as a predictive biomarker.

**Keywords:** Living donor liver transplantation, late-onset acute rejection, eosinophilia



## OP-135 [Transplantation]

## Our Experience in Early and Late Vascular Complications After Kidney Transplantation

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**Objective:** Although the most important cause of post-transplant graft loss is chronic allograft nephropathy, one of the most important factors affecting success is early and late surgical complications. Although vascular complications are not common, they are important because they are the complications that may require immediate intervention. We aimed to present our experience against vascular complications.

**Material and Methods:** The clinical findings, treatment approaches and results of the vascular complications that developed in early and late period in the recipients who underwent kidney transplantation in our clinic during the last 10 years were evaluated.

**Results:** Between January 2008 and January 2018, a total of 209 kidney transplant surgeries were evaluated. Eight patients with vascular complications were detected. Of the patients, 5 were male and 3 were female. The mean age was 42 years. As surgical technique, renal artery and vein anastomoses were performed in all patients as end-to-side to external iliac artery and vein. In three patients, hematoma developed in the late period after the surgery due to infection. While arterial anastomosis dissociation occurred in two of these patients, pseudoaneurysm developed in the vicinity of the anastomosis in one patient. Explantation and end-to-end anastomosis to external iliac artery, and saphenous patch-plasty were performed in the first two patients. Postoperatively, anastomotic dissociation developed secondary to infection in two patients, and external iliac artery ligation and femorofemoral PTFE graft bypass were performed. As a result of the experience obtained from these patients; after the bleeding control was provided with endovascular stent, surgery was scheduled for the patient in whom pseudoaneurysm developed. As the first surgical option; explantation, external iliac artery ligation and femorofemoral PTFE graft bypass were performed with the reason that the region was infected. Upon the development of artery anastomotic stricture in two patients in the late period and in one patient in the early period (4th day) after the transplantation; balloon angioplasty was performed with endovascular intervention. One patient underwent reanastomosis due to positional stenosis caused by atheromatous plaque at the level of anastomosis on the second day after transplantation. In one patient, renal vein thromboembolism was performed on the second day after transplantation upon the development of renal vein thrombosis. Upon the occurrence of renal vein thrombosis at the 12th hour after the operation; explantation, cold reperfusion and retransplantation in the contralateral iliac fossa were performed because the thrombus formation was thought to be originated from the external iliac vein. One of the patients with infected hematomas died due to sepsis that could not be controlled after surgery. The other 5 patients were discharged with normal value of creatinine.

**Conclusion:** Vascular complications following renal transplantation are important problems in terms of both patient and renal survival. The survival of patient and kidney can be prolonged as a result of early diagnosis and rapid-appropriate treatment. Bleeding in the region due to arterial anastomotic dissociation in the late period should suggest infection first. In order to ensure the continuity of circulation in the surgical procedure, the PTFE graft bypass procedure from the area remote from the infected region should be selected as a priority. We believe that renal survival may be possible if early diagnosis of renal vein thrombosis can be provided and that successful outcomes may be obtained with endovascular procedures in renal artery stenosis.

**Keywords:** Emergency surgery, kidney transplantation, endovascular intervention, vascular complication

## OP-136 [Transplantation]

## How to Perform Simultaneous Native Nephrectomy in Patients with Polycystic Kidney Disease Treated with Renal Transplantation? Bilateral-Unilateral

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**Objective:** Polycystic kidney disease (PKD) is an autosomal dominant inherited disease. Native nephrectomy (NN) along with renal transplant (RT) is not a procedure performed in the routine. In addition to massive proteinuria, chronic pyelonephritis, grade 5 reflux to the native kidney or PKD, it is also performed to make room for the kidney.

**Material and Methods:** Between November 2008 and October 2016, 3900 renal transplantations were performed in the Organ Transplantation Unit of Antalya Medicalpark. The patients in whom with RT and concomitant native nephrectomy were performed due to PKD were included in the study. The patients were divided into 2 groups. Those who underwent bilateral native nephrectomy (BNN) were included in Group 1, and those who underwent right nephrectomy (RN) were included in Group 2. The rates of the groups taken to the intensive care unit after the surgery, and the needs for resistant hypotension, acidosis, inotropic support in the intensive care unit (ICU) were investigated. The relationship of the patients being taken to the ICU with the age, duration of dialysis, gender, and the surgery performed was investigated.

**Results:** One hundred and eighteen patients were included in the study. Of the patients, 75 were male, and 43 female. The mean age was  $49.7 \pm 7.7$  (28-67); BNN was performed in 35 patients and RN was performed in 83 patients. Fifteen of 35 BNN patients were taken to ICU; hypotension and metabolic acidosis resistant to inotropes developed in these patients, and splenectomy was performed in 3 patients. One patient had cardiopulmonary arrest in ICU, and was resuscitated with CPR, ileus developed in one patient, and one patient died on the fourth day in ICU. One out of 83 patients who underwent RN was taken to the intensive care unit. Statistically significant differences were found between those who underwent BNN and RN in terms of ICU ( $p=0.000$ ).

**Conclusion:** Upon the high morbidity in patients with PKD who had undergone BNN with laparotomy in our clinic, NN was started to be performed in order to make room for the grafted kidney. PKD is a disease with a slow progress over the years. Adrenal glands are especially compressed between the kidney and the liver and spleen, and these glands, which normally have 5x3x1 cm dimensions, have a 0.1 mm thickness as a result of the pressure lasting for years and iatrogenic surrenalectomy is performed on them together with the kidney. In our clinic, we perform NN through the retroperitoneum by expanding the hockey stick incision in patients with PKD. Although it is considered as a technically difficult method, we have actually found it to be an easy method because, as the kidney grows over the years, it creates a dissection line around it, and has a minimal relationship with the intestines especially because it is in the retroperitoneum. They should be dissected carefully only when they are adhered to the adrenal glands. Because the laparotomy is not performed; bowel motility is not impaired, the patient's oral intake is started on the same day, and the duration of hospitalization decreases. We clinically recommend that NN be performed through unilateral hockey stick incision in patients with PKD.

This study has been published as "Which One Should We Perform for Native Nephrectomy in Renal Transplant Recipients with Polycystic Kidney Disease: Bilateral or Unilateral Nephrectomy? Eight-Year Experience in Our Transplantation Centre."

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**Keywords:** Autosomal dominant polycystic kidney, native nephrectomy, kidney transplant

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## OP-137 [General Surgical Diseases]

# Early Period Results of CRS+HIPEC (cytoreductive surgery+hyperthermic intraperitoneal chemotherapy)

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**Objective:** In the patient group selected for peritoneal carcinomatosis (PC); the success of hyperthermic intraperitoneal chemotherapy (HIPEC) with cytoreductive surgery (CRS) has been shown to improve survival and quality of life in end-stage cancer patients. In this study, we investigated the early results of our patients in whom we performed CRS+HIPEC.

**Material and Methods:** We retrospectively reviewed the files of 44 patients who underwent CRS+HIPEC in our hospital between June 2016 and January 2018 in terms of the demographic information, preoperative diagnosis, applied surgical techniques and early results of the patients. Ortalama The morbidity and mortality rates seen in patients during the mean follow-up period of 13 months (range, 1-20) were determined.

**Results:** Of the 44 patients, 18 were male (40.9%) and 26 were female (59%). The mean age was calculated as 59.5 years (range, 39-83) The primary pathology of the patients was colorectal carcinoma (n=22, 50%), ovary carcinoma (n=13, 29.5%), sarcomatosis (n=5, 11.3%), and gastric carcinoma (n=3, 1, 2.2%). Of these patients, 29 (65.9%) received neoadjuvant chemoradiotherapy. While the number of patients in whom only CRS was performed for economic reasons was 24 (54.5%), CRS+HIPEC was performed at a rate of 45.4% (n=20). Optimal CRS procedure was performed in the patients during the operation. While visceral and parietal peritonectomy+colon and partial small bowel resection+omentectomy+cholecystectomy+hepatoduodenal lymph node dissection (LND)+splenectomy+paraaortic LND+hepatic metastasectomy were performed in patients with colorectal carcinoma; total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH+BSO)+pelvic paraaortic LND+omentectomy+visceral and parietal peritonectomy+involved organ resection were performed in patients with ovary carcinoma. Total gastrectomy+D2 LND+cholecystectomy+omentectomy+visceral and parietal peritonectomy+splenectomy were performed in gastric carcinoma. Resection completeness score (CC) was found to be 0/1 in 90.9% (n=40) of the patients. In patients treated with HIPEC; colorectal tumors were given oxaliplatin intraperitoneally at 42-43 °C and 5-fluorouracil (FU)+leucovorin intravenously. The

patients with ovary, sarcomatosis, mesothelioma and stomach carcinoma were intraperitoneally given cisplatin+doxorubicin. Complications were observed in a total of 22 patients (50%) postoperatively; 7 of these patients (15.9%) were re-operated. Neutropenia (n=4, 9%), anastomotic leakage (n=3,% 6.8), evisceration (n=3,% 6.8), abdominal abscess (N=2, 4.5%), biliary leakage (n=2, 4.5%), hemorrhage (n=2, 4.5%), pneumonia (n=2, 4.5%), pulmonary embolism (n=2, 4.5%), thrombocytopenia (n=1, 2.2%), and sepsis (n=1, 2.2%) were the complications that were encountered. Our overall mortality rate was calculated as 13.6%.

**Conclusion:** CRS+HIPEC administration gives positive results in the group of patients with PC in terms of quality of life and survival. It is essential that CRS+HIPEC surgery, a long and complicated procedure, be performed by experienced surgical oncologists in selected patient groups.

**Keywords:** Peritoneal carcinomatosis (PC), cytoreductive surgery (CRS), hyperthermic intraperitoneal chemotherapy (HIPEC)

## OP-138 [Thromboembolism, Anticoagulants]

# Clinical and Surgical Results of Vascular Reconstruction and Extremity-Salvage Surgery Applied in Soft Tissue Sarcomas Located in Extremities

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**Objective:** Extremity-salvage surgery is the standard treatment of soft tissue sarcomas (STS) showing extremity involvement. In a small group of patients; while completely excising the tumor with adequate resection limits, additional vascular resection and reconstruction procedures may be required to preserve the viability and function the extremity. The aim of this study is to evaluate the surgical outcomes and clinical features of the patients with soft tissue sarcoma located in the extremities and requiring vascular reconstruction.

**Material and Methods:** Thirteen patients who were admitted for upper or lower extremity STS between January 2002 and December 2014, who had major vascular invasion and who underwent extremity-salvage surgery with vascular reconstruction procedures were included in the study. The patients were treated with a multidisciplinary approach at the Medical Faculty of Ankara University by a team of orthopedists, vascular surgeons, medical and radiation oncologists. The demographic characteristics, histopathological findings, complications, success of vascular reconstruction, and clinical and oncologic results were retrospectively reviewed.

**Results:** In the study in which a total of 7 female and 6 male patients were included, 24 vascular reconstruction procedures (only arterial in one patient, only venous in one patient and both arterial and venous in 11 patients) were performed during an average follow-up period of 80.6 months (6.5-145.0). Only one of the patients had upper extremity involvement. The lower extremity involvement was most common in the thigh region (61.5%). Swelling and pain were the most common clinical findings and were observed in 11 and 9 patients, respectively. The most commonly affected vascular structures were the femoral artery (n=9, 69.2%) and vein (n=9, 69.2%). Mostly, contralateral saphenous vein (saphena magna) graft was preferred for vascular reconstruction. A synthetic polytetrafluoroethylene (PTFE) graft was used for the reconstruction of femoral artery in one patient. The total complication rate was calculated as 69.2%. The most common complications were limb edema, hematoma, wound complications (healing impairment, surgical field infection and/or skin necrosis), neuropraxia and seroma. In total, five graft thromboses were detected in four patients. While arterial occlusion occurred in two patients, venous bypasses were obstructed in three patients. While five-year openness for arterial and venous reconstruction was calculated as 84.6% and 75.2%, respectively; the 5-year disease-free and overall survival rates of the patients with a mean life span of 105.5 months were calculated as 59.3% and 68.4%, respectively.

**Conclusion:** Vascular resection and reconstruction for extremity soft tissue sarcomas can be safely performed with acceptable short and long term surgical and oncological outcomes. Regardless of the surgical procedure (amputation or extremity-salvage surgery), the primary focus should always be on the obedience to the oncologic principles. In addition, due to the complexity of these tumors, proper preoperative planning and a rigorous multidisciplinary approach are also of great importance.

**Keywords:** Extremity-salvage surgery, multidisciplinary, vascular reconstruction, soft tissue sarcoma

## OP-139 [Surgical Area Infection, Surgical Intensive Care]

# Folding and Shrinkage in Polypropylene Patch, and Their Relation with Infection: Experimental Research

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**Objective:** The aim of this study is to investigate the effect of folding and *S.Aureus*-induced patch infection development on the bacterial load and patch shrinkage during the application of polypropylene patches placed on the abdominal wall of a rat.

**Material and Methods:** This study was carried out with the ethics committee approval of experimental animals dated May 5, 2016, record no. 2015/94 and numbered 2015/94-01 of Hacettepe University Faculty of Medicine. During the experiment, 4 groups consisting of 10 Sprague-Dawley rats were formed. Group 1 and Group 2 were identified as control groups. In these groups, a 20x20 mm and a folded 40x20 mm polypropylene patches were fixed to the abdominal anterior walls with prolene sutures. Their skins were closed by dripping 0.5 ml of physiological saline. After 20x20 mm and folded 40x20 mm polypropylene patches were attached to the anterior abdominal wall in the subjects of Group 3 and Group 4, respectively; 0.5 ml  $1 \times 10^9$  cfu/ml *S.Aureus* was implanted on the patches and the skins were closed. After the subjects were sacrificed on the sixteenth day, their skin was opened and photographed, and their surface areas were measured using the ImageJ program. Cultivation was performed for quantitative microbiological evaluation after the patches were removed.

**Results:** In group 4, three subjects had dissociation on the incision line and abscess formation on the patch. In groups 3 and 4, patch areas were found to be statistically significantly lower and 5.29%-4.74% shrinkage was detected, respectively, in the patches ( $p=0.001$ ). Bacterial concentrations of  $4300 \pm 7557$  and  $61660 \pm 49553$  cfu/mm<sup>2</sup> were detected in Group 3 and Group 4, respectively. The difference between colony count values between two infected groups was statistically significant ( $p=0.003$ ). In addition, the positive causality relationship was found to be at a rate of 74% between the patch surface area and bacterial colonization.

**Conclusion:** In this study in which the effects of polypropylene patch folding on the development of surgical area infection and patch shrinkage were investigated; it was observed that patch folding increased bacterial colonization, the patch shrinkage rates in the infected groups were significantly higher, and there was a positive causality correlation between bacterial colonization and the increased surface area. The use of the smallest possible patch in hernia operations in order not to reduce the effectiveness of the treatment and avoiding the folding of the patches reduce bacterial colonization on the patch and thereby, possible patch infections. Another issue that needs to be kept in mind is that shrinkage will increase in the presence of infection. This study has been conducted as a specialty thesis. No financial support was received for the study. There is no conflict of interest.

**Keywords:** Hernia, polypropylene patch, patch infection, patch shrinkage

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## OP-140 [Surgical Area Infection, Surgical Intensive Care]

# Surgical Area Infections Developing After Colorectal Surgery

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**Objective:** Colorectal surgery is the surgical procedure in which surgical site infection is seen most frequently. Surgical field infections may cause perioperative morbidity, prolongation of postoperative hospital stay, and most importantly, multidrug resistant infections. In this study, it is aimed to compare surgical field infection in patients who underwent colorectal surgery due to colorectal cancer and due to gynecological malignancy.

**Material and Methods:** Five hundred and ninety-four patients who underwent emergency and elective colorectal surgery in our clinic between January 2011 and October 2016 were included in the study. The data of the patients were evaluated retrospectively. The demographic characteristics of the patients, applied surgery, postoperative complications, the duration of stay in intensive care unit and the contributions of all these parameters to infection development were evaluated. In addition, the patient data were examined in terms of infection factors, antibiotic susceptibility, multidrug resistance and the treatments applied.

**Results:** The mean age of 594 patients included in the study was 65, and 192 patients (32.3%) were male. Of the surgeries, 382 (% 64.3) were performed due to colorectal cancer, and 212 (% 35.7) were the patients who underwent colorectal surgery because colorectal invasion was detected due to gynecological malignancy. Colorectal surgery was performed under elective conditions ( $n=145$  laparoscopic) in 331 patients (55.7%) and urgent surgery ( $n=12$  laparoscopic) was performed in 263 (44.2%) of them. The operation of the patients with gynecological malignancy was evaluated within the scope of emergency operation. Infection developed in a total of 181 patients (30.5%) ( $n=39$  wound site infection,  $n=110$  intraabdominal infection,  $n=17$  bacteriemia,  $n=15$  other). While infection developed in 109 (51.4%) of the patients who underwent colorectal surgery due to gynecologic malignancy, it developed in 72 (18.8%) of the patients operated due to colorectal cancer. Infection developed in 24 (45.2%) of 53 patients who received emergency surgery due to colorectal cancer. In 32 patients (8.4%) who underwent surgery for colorectal cancer, multidrug resistant infections were seen, whereas they developed in 39 patients (18.4%) with gynecological malignancy. While the mean duration of hospitalization was  $20.6 \pm 16.3$  days (range 1-101) days in infected patients, it was  $8 \pm 6.2$  (range 1-75) days in non-infected patients.

**Conclusion:** Surgical site infections that occur after colorectal surgery increase the morbidity and mortality in patients. The incidence of surgical site infections in colorectal surgery performed in emergency conditions is higher than in elective operations. The surgery of patients with gynecological malignancy after the intestinal cleansing provided before the surgery through radiological and endoscopic evaluations may decrease the incidence of surgical site infections.

**Keywords:** Surgical wound infections, multidrug resistance, gynecologic tumors, colorectal tumors

## OP-141 [General Surgical Diseases]

# Blood Transfer to the Point of Warfare Injuries: Have We Not Come to that Point Yet?

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**Objective:** Hemorrhage is the most important cause of mortality due to war injuries in the prehospital period. The worst case scenarios and the needs of the Turkish Army have been studied. Since blood products are planned to be applied to the injured during evacuation in this environment, the effect of mechanical stress on erythrocyte suspensions (ES) during transport has been investigated through biomechanical and biochemical parameters.

**Material and Methods:** This in vitro experimental study was carried out in ASELSAN® outdoor laboratories. The vibrations generated by the NATO vibration standard MIL-STD-810G software, and by Sikorsky helicopter and Kirpi Vehicle, which can be used in the evacuation of the injured, were measured. The NATO standard, which is the most severe vibration, was applied to fifteen units of fresh erythrocyte suspensions ( $\leq 7$  days), and to ten units of unfresh erythrocyte suspensions ( $> 7$  days) for 24 hours in a cooler bag. Vibrations were simulated by the TDS v895 Medium-Force Shaker Device. The blood samples were analyzed at 0<sup>th</sup>, 6<sup>th</sup> and 24<sup>th</sup> hours.

**Results:** Fresh and unfresh ESs were 4.9 (SD $\pm$ 2.2) and 32.8 (SD $\pm$ 11.8) days, respectively. The mechanical damage caused on fresh erythrocytes by road vibration was demonstrated by the presence of fragmentation of the erythrocytes ( $p=0.015$ ), hemolysis ( $p=0.003$ ), increase in supernatant potassium ( $p=0.003$ ), and decrease in the Htc levels ( $p=0.015$ ) in the first 6 hours. As a result of the first 6 hours, only 2 units (13%) of fresh ESs remained available according to the national blood quality standards. The rate of hemolysis ( $p=0.015$ ), supernatant potassium ( $p=0.015$ ) and supernatant Hb ( $p=0.015$ ) increased and Htc ( $p=0.015$ ) values decreased in unfresh ESs in the first 6 hours. None of the unfresh ESs were found useable in humans at the end of 6 hours.

**Conclusion:** In our study, in which the difficult conditions of battlefield were simulated; hemolysis occurred in fresh and unfresh ESs, which would be out of the European quality standards. There is no technology in the world to prevent the hemolysis of blood in such an environment that we tested. A new national project is being prepared in the light of the experiences gained in this study.

**Keywords:** Injury, blood, transfer, haemolysis

## OP-142 [Obesity]

# Re-hospitalization Rates and Causes in 755 Consecutive Cases of Primary Laparoscopic Sleeve Gastrectomy in a Single Center

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**Objective:** The rate of hospitalization after laparoscopic sleeve gastrectomy is reported as 4%. In our study, the rate of re-hospitalization, reasons for hospitalization and the treatments applied were examined in those who underwent LSG in our clinic.

**Material and Methods:** The patients undergoing bariatric surgery in our clinic between January 2011 and December 2017 were evaluated within the scope of the study, and non-LSG patients, the patients in whom revisional procedures were performed and the patients in whom complications developed before being discharged from the hospital were excluded from the study. The demographic characteristics of the patients, the number of days that the patients were re-hospitalized after the surgery, the reason for hospitalization, the applied treatments and the results were recorded and examined.

**Results:** The mean age was  $37.76 \pm 10.12$  years in a total of 755 patients, 130 of whom were male (17.2%) and 625 were female (82.8%). The number of patients who were re-hospitalized 1 month after the surgery was 51 (6.8%), the mean age was  $37.2 \pm 10.2$  years and the most frequent reason for re-hospitalization was leakage in 13 patients (1.7%). Other causes were found to be lower abdominal pain (1.5%), vomiting (1.3%), abscess (0.7%), hematoma (0.5%), wound infection (0.4%), dyspnea (0.3%), renal insufficiency (0.1%), fever (0.1%) and deep vein thrombosis (0.1%), respectively. Seven of the patients who were re-hospitalized were male (14%) and 44 (86%) were female, and no difference was found in terms of age and gender distribution with the patients who were not re-hospitalized ( $p > 0.05$ ). The mean duration between the re-hospitalization day and the operation day was  $10.1 \pm 5.1$  days (4-22 days). The most common symptom in patients with leakage was fever and upper abdominal pain, and the mean duration until the admission was  $7 \pm 1.8$  days. The most common cause of lower abdominal pain was ovary pathologies (55%). Intra-abdominal abscess was observed in the adjacency to the trocar where the specimen was removed in 3 patients, and in the left paracolic area in two patients. Hematoma localization was lower left lobe of the liver in two patients and adjacency of stapler line in the other two patients. Response to the treatment was obtained in 10 of the patients hospitalized for vomiting; one patient had Wernicke's encephalopathy and recovered with high dose of thiamine replacement without sequelae. The pathology required medical treatment in 27 (53%) patients, percutaneous drainage in 9 (18%) and surgical intervention in 15 (29%) patients. The mean hospitalization day was  $17.8 \pm 26.6$  days in patients who were re-hospitalized. The longest average of hospitalizations was observed in the group with leakage with  $50.7 \pm 31.4$  days. Two patients (4%) died. Forty-nine (96%) patients were able to be discharged without any problems. When the patients were divided as the initial period and (400 patients) and the late period (355 patients), the rates of re-hospitalizations were similar (7% vs 6.4%,  $p > 0.05$ ).

**Conclusion:** The rate of re-hospitalizations was found to be higher in our study than in the literature. This may be attributed to the fact that the patients were admitted to our center from distant settlements. Percutaneous or surgical intervention was required in nearly half of the patients, and the increase in surgical experience did not affect the rates of re-hospitalization.

**Keywords:** Laparoscopic sleeve gastrectomy, re-hospitalization, complication

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## OP-143 [Obesity]

# Transit Bipartition Surgery in the Surgical Treatment of Type 2 Diabetes; 2-Year Follow-Up Results

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**Objective:** Type 2 diabetes is an important component of the "Metabolic Syndrome" that results from excess fat accumulation in the body. Transit bipartition surgery (TB) is an effective procedure which is used in the treatment of type 2 diabetes and whose results have newly been emerging. As the Metabolic Surgical Foundation, we aimed to present the results of TB surgery performed.

**Material and Methods:** In a total of 658 TB surgeries, 90 patients who regularly attended the control examinations for 2 years as of January 2015 were included in the study. Attending the 1st, 6th, 12th and 24th month controls without interruption was accepted as the regular follow-up criterion. The patients in whom gas/stool discharge was provided on the 3rd-4th days were discharged and the follow-up data were recorded in accordance with the above principles.

**Results:** All operations were performed through laparoscopic method. The mean duration of surgery was 105 min (150 min-85 min). Of the 90 patients (43 men/47 women), 56 (62.2%) used insulin or insulin+oral antidiabetic (OAD) and 34 (37.8%) patients used only OAD. The mean preoperative BMI was determined to be 34.2, FBS was 213, HbA1C was 8.8, total cholesterol was 203.9, and triglyceride was 273.8. At the end of the 24<sup>th</sup> month, the mean BMI was 25, FBS was 123.3, HbA1C was 6.5, total cholesterol was 166.9, and triglyceride was 128.4. In the 24<sup>th</sup> week, 72% complete remission and 25.7% partial remission (97.2% improvement in general) were observed in hypertension, which is one of the in comorbid data; 66.6% complete remission and 61.5% partial remission (90.3% improvement in general) was observed in diabetes, and the rate of insulin discontinuation was seen as 100%. A 100% of recovery rate was found in apnea and this rate was found to be 81.2% in hypercholesterolemia/triglyceridemia. None of the patients had any loss of vitamins/minerals that would require regular replacement. Morbidity was 0.8% (bleeding in 2 cases requiring operation, leakage in 1 case, permanent diarrhea in 2 cases) and the mortality was 0.4% (MI in 1, thromboembolism in 1, and MOF in 1).

**Conclusion:** We believe that TB surgery is a highly effective and reliable procedure that does not lead to any absorption impairment in the surgical treatment of Type 2 diabetes mellitus.

**Keywords:** Transit bipartition, metabolic surgery, Type 2 diabetes

## OP-144 [Obesity]

# 5-Year Results of Laparoscopic Sleeve Gastrectomy in 1113 Patients at Bariatric Surgical Center of Excellence

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Laparoscopic sleeve gastrectomy (LSG) has recently become widespread in the world. In this study, we retrospectively evaluated the results of patients undergoing laparoscopic sleeve gastrectomy due to obesity at the bariatric surgical center of excellence. All patients who underwent LSG between July 2013 and January 2018 were evaluated retrospectively. Preoperative and postoperative variables and comorbidities were recorded. In the study, 1113 patients were included. The mean age was 38.3 years and the mean body mass index was 41.44 kg/m<sup>2</sup>. Of the patients, 71% (790) were female. The most frequent preoperative comorbidities were diabetes (22.7%), hyperlipidemia (20.8%), hypertension (19.8%) and obstructive sleep apnea syndrome (20.1%). The recovery rates of comorbidities during the follow-ups were 80.6%, 74.4%, 82.9% and 94.3%, respectively. The postoperative rates of losing excess weight in the 1st, 3rd and 6th months, and in the 1st and 2nd years were 29.76%±11.56%, 54.94%±18.18%, 77.55%±27.25%, 93.58%±24.71%, and 91.52%±41.06%, respectively. Intra-abdominal hemorrhage occurred in 6 patients in the early period; laparoscopy was performed in 3, and conservative follow-up was performed in 3 of them. Wound infection was found in 1 patient, and percutaneous drainage catheter was placed due to intra-abdominal abscess in 1 patient; fat necrosis was detected in 1 patient and early leakage in 1 patient. A stent was placed in the esophagus endoscopically. Stricture was detected in two patients in the late period, and it was treated with endoscopic balloon dilatation. There was no mortality. LSG is an effective method to lose weight and for the improvement of comorbidities.

**Keywords:** Diabetes, obesity, sleeve gastrectomy

## OP-145 [Emergency Surgery and Trauma]

# The Factors Affecting Survival in Open Abdomen Caused by Abdominal Sepsis

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**Objective:** We aimed to investigate the factors affecting survival in patients with intra-abdominal sepsis treated with open abdomen (OA) and negative pressure system (NPS). Our hypothesis is that NPS and OA applications reduce mortality in patients with severe intra-abdominal sepsis (SIAS).

**Material and Methods:** We retrospectively reviewed 40 OA patients who were managed with NPS for SIAS between January 2013 and September 2017 in our clinic. Living and mortal groups were compared in terms of the parameters of age, gender, body mass index (BMI), SIAS etiology, Apache II score, Mannheim peritonitis index (MPI) score, Bjorck classification, fascia score, abdominal defect size, the presence of stoma and fistula, fistula type, and the duration of NPS application. Whether these parameters were effective on survival was analyzed with SPSS software version 23.0. The patients who had preoperative SIAS or septic shock and who were treated with NPS were included in the study.

**Results:** Twenty-three patients were in the survival group and 17 patients were in the mortal group. The mean age and BMI were significantly high in the mortal group while there was no significant difference between the two groups in terms of gender. The most frequent causes of SIAS were anastomotic failure and small bowel perforations, and it constituted 67.5% of the patients. There was no significant difference between the groups in terms of etiology. There was a significant difference between the two groups according to Bjorck classification. The presence of fistula was statistically significant in terms of mortality (p: 0.021). The type of fistula was also significant in terms of mortality. Other parameters were not found to be significant.

**Conclusion:** We prefer to apply NPS and OA in patients with abdominal sepsis irrespective of the intraabdominal pressure levels before the first operation. Statistically significant differences between groups in terms of age, BMI, Bjourck classification, fistula presence, and fistula type are the most striking findings of our study and are the apparent evidences affecting survival. In the infected OA patients, the mortality rate is more than 50% in the literature. The additional presence of enteroatrophic fistula in the clinical situation further increases mortality and morbidity. Significant differences in terms of the presence and types of fistula showed that survival was directly related to low Bjourck stage and the absence of fistula. The limitation of our study was that it was a retrospective research and the number of patients was low. We used strict inclusion criteria in order to form our population with similar patients. The similarity of our patient population, where the same treatment strategies were applied, was the strong side of our study. Age and BMI are the results of the patients that we can not change, but Bjourck stage, and the presence and type of fistula are the results that we can change. Given the changeable outcomes, it is possible that survival increases. The results of our study indicated NPS and OA application before intra-abdominal adhesions for the prevention of fistula formation for better survival.

In conclusion, the 42.5% mortality rate in our study is lower than the mortality rate of abdominal sepsis patients in the literature. Our study showed that NPS and OA therapy increased survival in patients with surgical abdominal sepsis.

**Keywords:** Abdominal sepsis, open abdomen, negative pressure system

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## OP-146 [Emergency Surgery and Trauma]

# Risk Factors for Intra-abdominal Pressure Increase in Patients Operated due to Penetrating Abdominal Trauma

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**Objective:** Intra-abdominal hypertension (IAHT) continues to be a significant cause of morbidity and mortality in patients undergoing surgery due to penetrating abdominal trauma. For this reason, it is important to identify the risk factors for IAHT and to initiate early treatment.

This study was planned to determine the risk factors for the development of IAHT in patients with penetrating abdominal trauma.

**Material and Methods:** A total of 94 patients who underwent laparotomy due to firearm injury between 2011 and 2011 and whose abdomen was closed and followed up in intensive care unit were evaluated. The patients with open abdomen or those treated with negative pressure systems were excluded from the study. The age, gender, injury severity score (ISS), amount of erythrocyte suspension, body temperature, pH value in arterial blood gases, INR and albumin levels were evaluated in the patients. Intra-abdominal pressure (IAP) was measured through the bladder catheter with 8-hour intervals and grouped as low (0-12 mmHg), medium (12-20 mmHg) and high pressure (> 20 mmHg), and the groups were statistically compared with the above parameters.

**Results:** The mean age of the patients was 29. Intra-abdominal pressure was measured as low (30,8%) in 29 patients, as moderate (50%) in 47 and as high (19,1%) in 18 patients. There was no significant difference between the groups in terms of the mean age ( $p=0.12$ ). The ISS value of all patients was higher than 17, and there was no statistically significant difference between the groups ( $p=0.07$ ). The erythrocyte suspensions given to the groups were  $3\pm 2$ ;  $4\pm 2$  and  $8\pm 4$  units, respectively; significantly more transfusions were performed in IAP group ( $p=0.01$ ). Body temperature was  $36.7\pm 0.52$ ,  $36.5\pm 0.65$  and  $35.3\pm 0.81$  °C, respectively and significantly lower in the high IAP group ( $p=0.02$ ). The pH level was  $7.33\pm 0.12$ ,  $7.31\pm 0.9$ , and  $7.29\pm 0.11$ , respectively and there was no significant difference between the groups ( $p=0.09$ ). INR level was  $1.3\pm 1.61$ ,  $1.6\pm 1.82$  and  $3.9\pm 1.57$ , respectively, and it was higher in high IAP group ( $p=0.01$ ). Albumin level was measured as  $3.1\pm 1.1$ ,  $2.3\pm 0.9$  and  $1.9\pm 1.3$  mg/dl, respectively, and was significantly higher in high IAP group ( $p=0.03$ ).

**Conclusion:** In our study; giving high number of erythrocyte suspensions, hypothermia, high INR level and low albumin level in firearm abdominal injuries were the risk factors for postoperative intra-abdominal hypertension. These criteria should be considered as stimulating factors in terms of the development of intra-abdominal hypertension.

**Keywords:** Firearm injury, intra-abdominal hypertension, hypothermia, coagulopathy

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## OP-147 [Emergency Surgery and Trauma]

# Intra-Abdominal Injuries Associated With Pelvic Trauma: The Investigation Of 471 Pelvic Trauma Patients In The Level 1 Trauma Center



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**Objective:** In most cases, the vast majority of pelvic injuries do not have a life-threatening clinic, but its management becomes more difficult when combined with extrapelvic injuries. Because of its fuzzy and heterogeneous nature, the first treatment of pelvic injury is difficult. Immediate evaluation of the severity is very important because of the possibility of multiple trauma. Pelvic fractures are usually caused by high kinetic energy, such as motor vehicle accidents in the younger population, and the morbidity and mortality in these injuries usually occur with the associated lesions such as other intra-abdominal injuries, and the large majority of the prognosis is associated with the severity of the related injuries. For older people, the reason is usually low-energy trauma. The purpose of this study is to evaluate the association of the severity of pelvic fractures caused by trauma with the extra-pelvic and essentially associated intra-abdominal injuries.

**Material and Methods:** This retrospective study approved by the Local Ethics Committee was conducted by evaluating 471 adult ( $\geq 18$ ) patients who were admitted to Ankara Dışkapı Training and Research Hospital Emergency Service due to pelvic fracture between January 2012 and December 2017. Demographic data, clinical status, operations, interventions, duration of hospital stay, and imaging results were evaluated in all patients. Pelvic fractures of all patients were reclassified in accordance with the classification of the American Orthopedic Foundation and Orthopedic Trauma Association (AO/OTA) and the statistical analysis of related traumas was performed. SPSS analysis system was used during statistical analysis.

**Results:** Of the patients included in the study, 53% (n=237) were male and 49.7% were female (n=234). The most common type of trauma was traffic accidents (66.8%, n=314). There was no relationship between the AO classification and the duration of the hospital stay. There was a significant difference in the distribution of those who had orthopedic surgery through AO classification, but no statistically significant difference was found in the distribution of non-orthopedic operations, especially in the distribution of general surgery. There was no statistically significant relationship between pelvic fracture severity and mortality and between survival and those who underwent surgery. Operation was performed in 141 of a total of 471 patients diagnosed with pelvic fracture, and while 105 (74%) of these patients were treated only orthopedically, 20 (14%) of them underwent general surgery operation; this rate was 12% in all other surgical branches. Approximately 82% of general surgery operations were liver and spleen operations.

**Conclusion:** The correlation between the severity of pelvic fractures and the incidence of associated extrapelvic injury, especially abdominal injury, is unclear. In our study, the presentation of extrapelvic injuries did not correlate with AO classification, which measures the severity of pelvic trauma. In reference to the final guidelines; regardless of pelvic fracture severity, advanced thoracic and abdominal evaluation of the admitted patients is considered to be appropriate.

**Keywords:** Pelvic trauma, intra-abdominal, AO classification

## OP-148 [Emergency Surgery and Trauma]

# Selective Nonoperative Approach in Abdominal Firearm Injuries

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**Objective:** Currently, selective nonoperative treatment approach is commonly used in abdominal sharp object injuries (SOI). Thus, unnecessary laparotomy rates are reduced and a reduction is provided in laparotomy-related morbidity. Selective nonoperative approach is preferred less frequently in abdominal Firearm Injuries (FI). In this study, we aimed to investigate the outcomes of the patients treated with nonoperative approach in suitable FI localizations related to the abdominal region.

**Material and Methods:** We retrospectively reviewed the prospective database of the patients admitted and treated due to abdominal FI in our clinic between January 2009 and January 2017. The patients who were hemodynamically unstable or had peritonitis findings were operated. Computed tomography examinations were performed in the patients who had stable hemodynamics, who did not have peritonitis findings and whose injured regions were anatomically appropriate (right thoracoabdominal, left thoracoabdominal, pelvic, flank and posterior abdominal region injuries) and they were followed up with a selective nonoperative approach. The patients were evaluated in terms of age, gender, injury mechanism, region of injury, treatment method, operation and mortality.

**Results:** Of the 94 patients with abdominal FI, 84 (89%) were male and 10 (11%) were female, and the mean age was 32.7 (4-60 years). Eighty-two (87.2%) patients were injured with bullets and 12 (12.8%) patients were injured with pellet. Twenty-one

(22.3%) of the patients were operated immediately due to hemodynamic instability, and 27 (28.7%) due to peritonitis findings. Laparotomy was performed in 56 (59.6%) patients, thoracotomy in 8 (8.5%) patients, and thorax tube was placed in 13 patients (13.8%). The patients whose injury localization was appropriate, who had stable hemodynamics and did not have peritonitis findings were followed up nonoperatively. Early laparotomy (in the first 8 hours) was performed in 5 (5.3%) of these patients in whom peritonitis findings developed during the follow-up and late laparotomy (after 8 hours) in 8 (8.5%) of them. Negative or nontherapeutic laparotomy was performed in a total of 6 (6.4%) patients. The follow-up and treatment of the remaining 33 (35.1%) patients were terminated without operation. There were a total of 34 anatomic region injuries in these patients. Eleven (44%) of 25 patients with pelvic region injuries, 8 (44.4%) of 18 patients with right thoracoabdominal region injuries, 11 (64.7%) of 17 patients with flank area injuries, 3 (21.4%) of 14 patients with left thoracoabdominal region injuries and 1 (33.3%) of 3 patients with posterior abdominal injuries were followed up and treated nonoperatively. Ten (10.6%) patients died. Nine of these patients were those who were operated due to hemodynamic instability and one was the patient who was followed up nonoperatively and had lower extremity vascular injury.

**Conclusion:** As indicated in many resources today, the appropriate patients with abdominal FI can be followed up nonoperatively. Thus, the risk of morbidity related to unnecessary laparotomy can be reduced. Selective nonoperative approach is a safe treatment method in abdominal FI patients with stable haemodynamics, with no peritonitis findings, and with appropriate injury region. Success rates are high especially in patients with flank, thoracoabdominal, and pelvic region injuries.

**Keywords:** Abdominal, firearm injury, nonoperative follow-up

## OP-149 [Breast Diseases and Surgery]

# Axillary Staging After Neoadjuvant Chemotherapy: The Comparison of the Ultrasound and 18F-FDG PET/CT, Performed by the Surgeon, in terms of Predicting the Pathologic Status of Sentinel Lymph Nodes in Clinically Node-Negative Invasive Breast Cancer

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**Objective:** Choosing the most appropriate method for correct axillary staging after neoadjuvant chemotherapy (NAC) is a big problem for the surgeon. Sentinel lymph node biopsy (SLNB) in clinically node negative (kN0) disease is the recommended method for axillary staging. However, the role of preoperative axillary ultrasound (AUS) or 18F-FDG PET/CT in the staging of kN0 patients after NAC is controversial. The aim of our study is to evaluate the correlation between AUS and 18F-FDG PET/CT performed by the surgeon and SLNB results in kN0 axillary after NAC and to determine the role of AUS in predicting the pathological status of axillary.

**Material and Methods:** The data prospectively recorded in a single center were retrospectively reviewed for the patients with kN0 after NAC and with preoperative AUS and 18F-FDG PET/CT. While the axillary ultrasound was defined as 'normal' in the absence of findings with specific metastases, 18F-FDG PET/CT results were interpreted as negative or positive in accordance with the standard uptake values (SUV). The patient, tumor, operative variables and the results of AUS, 18F-FDG PET/CT and SLNB were comparatively analyzed.

**Results:** SLNB was found to be positive in 37 (53.6%) of 69 (43.6%) patients with kN0 after NAC. The permanent section results of SLNB were reported to be positive in two (9.5%) of 21 patients with normal AUS and in 3 (21.4%) of 14 patients with negative PET/CT. Intraoperative ultrasound detected SLN correctly in 92.7% of the cases. Sensitivity, specificity, positive and negative predictive values were 94.5%, 59.3%, 72.9% and 90.5% for AUS and 91.8%, 34.4%, 61.8% and 78.6% for PET/CT, respectively. Overall accuracy was detected as 78.2% for AUS and as 65.2% for PET/CT. The presence of lymphovascular invasion (LVI), micrometastasis, primary tumor size, and BMI caused significant differences in true and false negative AUS results. None of the clinicopathologic features of the primary tumor was found to lead to significant FDG involvement in the axillary lesion. It was observed that micrometastatic disease and the number and size of metastatic nodes were significantly associated with FDG involvement, and caused difference between true and false negativity of PET/CT for axillary disease.

**Conclusion:** AUS, which is performed by the surgeon, is a useful method with the potential to predict axillary disease correctly in 78% of patients after NAC. However, the diagnostic efficacy of the AUS data should be questioned carefully in the presence of

micrometastases in large tumors with lymphovascular invasion or in overweight patients. Similarly presented data indicate that PET/CT has a limited role in assessing axillary disease and is inadequate in predicting the status of axillary status especially in the case of micrometastasis after NAC.

**Keywords:** Neoadjuvant chemotherapy, axillary ultrasonography, PET, CT

## OP-150 [Breast Diseases and Surgery]

# How Reliable is the Sentinel Lymph Node Sampling with Single Agent after Neoadjuvant Chemotherapy

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**Objective:** The timing of Sentinel Lymph Node Biopsy (SLNB) in breast cancer patients who are required to receive neoadjuvant chemotherapy (NAC) is still controversial. In patients with breast cancer with axillary metastasis, the rate of negative LN changes between 20 and 40% after neoadjuvant chemotherapy. In this patient group, axillary lymph node dissection (AD) causes unnecessary morbidity. The rate of SLNB in patients with clinically negative axilla after NAC was reported as 78-88% in high volume studies. This low ratio has led to a wide variety of studies on the development of SLNB technique and patient selection. Our aim in this study is to reveal the rate of SLNB detection in patients with clinically negative axilla after NAC, the factors affecting the rate of SLNB detection, and the response of both mass and axilla to chemotherapy.

**Material and Methods:** Three hundred and sixty-one patients who were operated due to breast cancer in the General Surgery Clinic of Sakarya University Medical Faculty, Training and Research Hospital between June 2014 and January 2018 were retrospectively evaluated. The demographic characteristics, NAC treatment, clinicopathologic features, type of surgery, the rates of SLNB detection and positivity, and NAC response were evaluated in reference to Miller-Payne regression classification. In all patients, SLN sampling was performed only with isosulfan blue as a single agent within the bounds of hospital possibilities.

**Results:** While the number of our patients who received NAC was 121 (33.5%), the number of patients who were directly operated was 240 (66.5%). The mean age of the patients was 54.9 (min: 24 & max: 86). Of our patients who received neoadjuvant CT, 14.3% were stage I, 52.4% were stage II, 20.2% were stage III, and 13.1% were stage IV. While the rate of SLNB detection was 91.8% in all patients, it was 96.4% in patients receiving adjuvant therapy and 83% in patients receiving NAC. The SLN detection rate was low in advanced ages (p: 0.070). While the lymph node was clinically positive, the rate of negativity after NAC was 30.6%. Metastatic LN was detected in 72.6% of patients who underwent SLNB. The rate of complete response was 26.4%. While the mean number of SLN was between 1 and 4 in 80% of the patients, it was >4 LN in 20% of the patients. While this rate was 78% in patients with metastatic LN, it was 86.4% in patients with negative lymph node. As the number of axillary metastatic LNs increased, the rate of SLN detection decreased. While the SLN detection rate was 88.9% in patients with metastatic LN number between 1 and 3, it was 63.6% in those with LN number between 4-7, and 50% in those with LN number more than 7 lymph nodes (p: 0.007). In patients with large tumor size before NAC, the rate of SLN detection decreased (p: 0.057). It was observed that this rate decreased as the tumor stage increased clinically and pathologically (Stage I: 100%, Stage IV: 72%).

**Conclusion:** Pathological complete response and axillary response rates after NAC in our study are compatible with high-volume studies. It is suggested that performing SLNB with dual technique may increase this detection rate. In our study; it has been shown that SLN sampling after neoadjuvant chemotherapy can be successfully performed with single agent in high-volume breast clinics.

**Keywords:** Neoadjuvant CT, sentinel lymph node, surgery

## OP-151 [Breast Diseases and Surgery]

# Simultaneous Reconstruction with Bilateral Prophylactic Nipple-Preserving Mastectomy and Implant in High-Risk Patients

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**Objective:** Breast cancer is the most common type of cancer in women, and one in every eight women (13.4%) is at risk for breast cancer. Germline mutations such as BRCA-1 and 2, which show hereditary transition, lead to 5-10% of breast cancers. The risk of life-long breast cancer development in mutation carriers is up to 90%, and among the existing ways of prevention, prophylactic mastectomy is the treatment that most effectively reduces the risk of breast cancer development.

**Material and Methods:** In our hospital, genetic analysis was performed for family history and the decision of prophylactic mastectomy was made after genetic counseling for the patients who had BRCA 1/2 positivity or who had BRCA 1/2 negativity, but had high family load, and surgical intervention was scheduled for this purpose. It was confirmed that the patients had no pathological and/or suspicious lesions through physical examination and imaging methods. In all patients, lateral and inferior breast fold incision was used. In all patients, it was tried that the skin flaps would be sufficiently thin to allow the removal of the entire breast tissue and continue the revitalization. A synthetic mesh prosthesis, one side of which could be absorbed in a short time and the other side in a long time, was placed under the skin to wrap the implant in the front side, and the lower breast fold were fixed to both breast folds with vicryl sutures. An absorbent drain was placed in the region and the layers were closed.

**Results:** Between the years of 2014 and 2017, 26 breasts of 13 women with a mean age of 43.5 were operated. Nine of them had BRCA 1/2 positivity and four had high family risk. Skin necrosis developed in a patient's breast. Although the skin defect in this patient was closed with latissimus dorsi flap, the loss of the prosthesis could not be avoided. No complications requiring surgical intervention developed in any of the other patients. All of the patients stated that they were satisfied with the operation and cosmetic results and they would recommend this surgery to similar patients.

**Conclusion:** While the risk of a woman with BRCA mutation to have breast cancer is 30% at 30 years old, it increases by 2% every year up to 50 years of age, by 1% after 50 years of age and reaches 85-90% at 70 years of age. In several studies, the risk reduction rate in BRCA 1/2 carriers ranged from 85% to 100% with prophylactic mastectomy within an average of 13 years. Reconstruction with nipple-preserving mastectomy and implant is one of the methods we frequently use in our clinic, and it is a method that we can apply without hesitation because of our clinical experience in individuals with high risk for breast cancer. The features to be highlighted in our series are that although the skin flaps were as thin as possible, necrosis did not develop; no additional complication was observed; permanent implant was applied only in one session and the cosmetic results were satisfactory; however, the limitation of our study was that the number of patients was low.

**Keywords:** BRCA, nipple-preserving mastectomy, prophylactic mastectomy, reconstruction with prosthesis

## OP-152 [Endocrine Surgery]

# The Relationship between the Surgical Style and Amount of Residual Tissue and the Postoperative Recurrence in Basedow-Graves Disease

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**Objective:** The treatment options of Basedow-Graves disease (BGD) include antithyroid drug therapy, ablation with radioactive iodine (RAI) and surgery. Surgery is the method that is permanent and has the lowest recurrence rate. In this study, the relationship of surgical extent and residual tissue volume with the recurrence was investigated in BGD treated with surgery.

**Material and Methods:** The data of 450 patients who underwent surgery with BGD diagnosis in the General Surgery Department of İstanbul Medical Faculty between March 1987 and January 2018 were reviewed retrospectively. Demographic characteristics, applied surgical method, the amount of tissue remaining after thyroidectomy, histopathologic features and recurrence rates were evaluated. The remaining tissue amount was calculated by using the in-vivo weight calculation formula (LENGTH x WIDTH x HEIGHT x 0,323) during the operation and with the tissue dimensions written in the surgery note. The type of surgery in which residual tissue amount was bigger than 1 gr was defined as subtotal thyroidectomy, it was defined as near total thyroidectomy when the residual tissue amount was smaller than 1 gr, and as total thyroidectomy when no tissue remained. The calculation of the remaining tissue amount after thyroidectomy was performed in 404 of 450 patients whose data were complete. The relationship between recurrence rate and type of surgery and the amount of remaining tissue was investigated. ROC analysis was performed to investigate the cut-off value of the amount of tissue affecting the recurrence rate significantly. The mean follow-up period was 12.3±5.6 years in the whole group.

**Results:** The average age of the whole group was 39±12.4 and the ratio of female to male was 335/115. Subtotal thyroidectomy was performed in 170 (38%) of a total of 450 patients and total/near total thyroidectomy was performed in 280 (62%) patient-

Histopathological examination revealed papillary thyroid cancer in 41 (9%) patients. The recurrence rate was found as 2.2% (10/450) in the whole group. The median duration of recurrence development was postoperatively found to be 12 months (6-60 months). There was no significant difference in terms of age and gender between the patients with and without recurrence ( $35\pm 10$  vs  $39\pm 12$ ;  $p=0.28$ ) ( $10/335$  vs  $0/115$ ,  $p=0.06$ ). The recurrence rate after subtotal thyroidectomy was 5.8% (10/170), but no recurrence was found after total/near-total thyroidectomy ( $p=0.0001$ ). While the remaining tissue amount was  $5.3\pm 0.94$  in 10 patients after thyroidectomy, it was found as  $1.6\pm 1.8$  in 394 patients without recurrence ( $p=0.0001$ ). The most significant cut-off value of the recurrence and remaining tissue amount in the ROC analysis was found as 4.2 g (Area under curve (AUC): 0.939; Standard error: 0.020;  $p=0.001$ ). While the recurrence rate was 16% ( $n=7$ ) in 43 patients with residual tissue amount over 4.2 gr, it was 0.8% ( $n=3$ ) in 361 patients with less tissue amount ( $p=0.001$ ). RAI ablation was performed in patients with recurrence.

**Conclusion:** The recurrence rate after subtotal thyroidectomy, leaving more than 4 g of tissue in BGD, is significantly higher than total/near total thyroidectomy. In the surgical treatment of BGD, the surgery type to be preferred to reduce the risk of recurrence should be total/total thyroidectomy.

**Keywords:** Basedow, graves, recurrence, total thyroidectomy

## OP-153 [Endocrine Surgery]

# The Effect of Central Neck Dissection on Complications in Thyroid Cancer

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**Objective:** It is still controversial whether or not, in addition to total central thyroidectomy, central neck dissection increases the risk of complications. In this study; we aimed to evaluate the effect of unilateral or bilateral central neck dissection on complication development in comparison to total thyroidectomy.

**Material and Methods:** The prospectively recorded data of 186 patients with a mean age of  $48.73\pm 14.78$  (17-82) (136 F, 50 M) who were operated due to thyroid malignancy were evaluated retrospectively. The patients were divided into 2 groups as those who underwent total thyroidectomy (Group 1) and those who underwent central dissection+/-total thyroidectomy+/-lateral dissection (Group 2). The groups were compared in terms of complication rates. Standard intraoperative nerve monitoring was performed in all patients. The groups were compared in terms of complication rates that were detected.

**Results:** There were 117 (91 F, 26 M) patients in Group 1 and 69 (45 F, 24 M) patients in Group 2. No significant difference was found between the groups in terms of age, gender, preoperative calcium, parathormone, vitamin D level and vitamin D deficiency. The rates of parathyroid autotransplantation in Group 1 and 2 were 6% and 42% ( $p<0.001$ ); the rate of parathyroid detection was 9.4% and 37.7% ( $p=0.001$ ) in the pathology specimens, respectively; both were significantly higher in the central dissection group. Total hypoparathyroid ratio in Group 1 and 2 was 25% and 40% ( $p<0.001$ ); the rates of transient hypoparathyroidism were 20.5% and 37% ( $p<0.001$ ), and the rates of permanent hypoparathyroidism were 0.9% and 5.8% ( $p=0.064$ ); the rates of total and transient hypoparathyroidism were significantly higher in the central dissection group. Intervention was performed in three hundred and sixty-six necks. Transient recurrent laryngeal nerve (RLS) paralysis developed in 6 (2.43%) of 247 lobectomies, and in 9 (7.56%) of the 119 nerves which were under risk and in which neck dissection was performed; it was significantly high in the neck dissection group ( $p=0.026$ ). The rates of transient RLS paralysis were 1.63% (4 RLS) in those who underwent lobectomy and 6.48% (7 RLS) in those who underwent central dissection, and the difference was significant ( $p=0.039$ ). Permanent RLS paralysis developed unilaterally in 4 patients. Two (0.81%) of these were on the lobectomy side and 2 (1.82%) were on the central dissection side ( $p=0.59$ ). Apart from these; chylous fistula developed in 1 patient in Group 2, transient paralysis in the marginal mandibular branch of the facial nerve developed in 2 patients who underwent lateral dissection, and shoulder pain developed in 3 patients. Central dissection was found in the logistic regression analysis to be an independent risk in terms of the development of both total hypocalcemia and total RLS paralysis.

**Conclusion:** Although unilateral or bilateral central neck dissection can be performed without increasing the rate of permanent complications compared to total thyroidectomy, it is an intervention that increases the total and transient hypoparathyroidism and the risk of transient RLS paralysis. Both the characteristics of the patient and the increased risk of complications should be considered in patient selection particularly for the prophylactic central dissection. Patients undergoing central dissection should be followed up carefully for temporary hypoparathyroidism.

**Keywords:** Total thyroidectomy, central neck dissection, RLS paralysis, hypoparathyroidism

## OP-154 [Endocrine Surgery]

# The Relationship Between Lymphocytic Thyroiditis and Papillary Thyroid Cancer Aggressiveness

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**Objective:** The presence of lymphocytic thyroiditis in the pathology specimens of Papillary thyroid carcinoma (PTC) is also not rare. There is a discussion in the literature about the relationship of this association. In this study, we aimed to evaluate whether there is a relationship between lymphocytic thyroiditis and PTC aggressiveness.

**Material and Methods:** The patients who were operated and diagnosed with PTC in their pathology between 2012 and 2017 were included in the study. The non-PTC cancer patients and the patients having hyperthyroidism and/or using antithyroid drugs were excluded from the study. The relationship between lymphocytic thyroiditis and male gender, age over 55 years, tumor over 1 cm, T3/4 tumor, multicentricity, lymphovascular invasion, lymph node metastasis, central metastasis, and lateral metastasis were evaluated in the patients included in the study.

**Results:** Of the 133 patients with a mean age of 46.4+13.6 (17-82), 103 were female and 30 were male. The rate of lymphocytic thyroiditis was 50% in patients under 55 years of age and 50% in those over 55 years of age; the difference was significant ( $p=0.023$ ). In the presence of lymphocytic thyroiditis, preoperative TSH ( $2,15+1.54$  vs  $1.53+1.55$ ,  $p=0.005$ ), anti-TPO ( $184+492$  vs  $23+79$ ,  $p<0.001$ ), and anti-Tg ( $226+621$  vs  $117+p<0.001$ ) were significantly high. There was no significant difference in terms of tumor lymphocytic thyroiditis in T3/4 tumor, multicentricity, lymphovascular invasion, the presence of general lymph node metastases, central metastasis, and the presence of lateral metastasis, which are considered as the characteristics of tumor aggressiveness.

**Conclusion:** In 44% of PTC patients, the pathology is accompanied by lymphocytic thyroiditis. Lymphocytic thyroiditis is more common in PTC patients under 55 years of age with a better prognosis. In addition, there was no significant relationship between lymphocytic thyroiditis and the other pathologic aggressiveness features of the tumor. However, there is a need to evaluate this issue in larger studies involving larger number of patients.

**Keywords:** Lymphocytic thyroiditis, papillary thyroid cancer, prognosis

## OP-155 [Endocrine Surgery]

# The Effect of Cytopathology-Histopathology Correlation and Nodule Diameter on The Diagnostic Performance in Patients who Underwent Thyroid Fine Needle Aspiration Biopsy

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**Objective:** Although thyroid fine needle aspiration biopsy (FNAB) is generally considered to have good sensitivity and specificity, different results have been reported regarding the performance in large nodules. In this retrospective study, we aimed to investigate the diagnostic performance of thyroid FNAB and the effect of nodule diameter on this.

**Material and Methods:** The results of a total of 7319 patients who underwent thyroid FNAB in a 5-year period were retrospectively reviewed and 648 patients who underwent thyroidectomy or lobectomy after thyroid FNAB were included in the study.

Biopsy results were classified according to the Bethesda system. Malignancy rates were calculated according to Bethesda subgroups. After the exclusion of 47 patients with non-diagnostic thyroid FNAB results, the compatibility of the cytology and pathology results of the remaining patients was assessed. The sensitivity, specificity, false positivity, false negativity and accuracy rates of thyroid FNAB were calculated for all nodules and for nodule diameter (<4 cm and ≥4).

**Results:** The sensitivity of thyroid FNAB was 85.4% for all nodules, 88.3% for the nodules smaller than 4 cm and 75.8% for the nodules larger than 4 cm ( $p<0.001$ ). The specificity that was found to be 58.4% for all nodules was determined as 49.3% for the nodules smaller than 4 cm and as 75.1% for the nodules larger than 4 cm ( $p<0.001$ ). While the rate of false positivity was 41.6% for all nodules, it was 50.7% for the nodules smaller than 4 cm and 24.9% for the nodules larger than 4 cm ( $p<0.001$ ). The rate of false negativity was 14.6% for all nodules, 11.7% for the nodules smaller than 4 cm and 24.2% for the nodules greater than 4 cm ( $p<0.001$ ). The accuracy rate was 64.4% for all nodules, 59.2% for the nodules smaller than 4 cm and 75.2% for the nodules larger than 4 cm ( $p<0.001$ ).

**Conclusion:** Despite high rates of false negativity; thyroid FNAB has high specificity and accuracy rates in large nodules compared to small ones. Nodule diameter should not be used as a criterion alone to recommend thyroidectomy to the patient.

**Keywords:** Cytology, thyroid fine needle aspiration biopsy, thyroid nodule

## OP-156 [Endocrine Surgery]

# The Contribution of Contrast Use in [99mTc] MIBI SPECT/CT in Primary Hyperparathyroidism

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Primary hyperparathyroidism is the third most common endocrine disorder after diabetes mellitus and hypothyroidism, and it affects approximately 0.3% of the general population. The primary treatment of parathyroid adenomas is surgery. As the success rate of localization of the adenoma increases in the surgery, a transition is observed from traditional 4-gland neck exploration to minimally invasive parathyroidectomy. The most commonly used methods for the localization of the parathyroid gland are [99mTc] MIBI SPECT/CT and USG. By adding a single phase contrast to [99mTc] MIBI SPECT/CT study, we aimed to compare the preoperative contrast-enhanced [99mTc] MIBI SPECT/CT results with the surgical results. Twenty-four (21 female, 3 male) patients who were operated after preoperative contrast enhanced [99mTc] MIBI SPECT/CT between 2016 and 2018, and 49 (42 female, 7 male) asymptomatic patients who were not operated were included in the study. The sensitivity and specificity rates of contrast enhanced [99mTc] MIBI SPECT/CT were found to be 100% and 100% when evaluated together with surgical results. The rate of detection in asymptomatic patients was 93.8%. With high contrast [99mTc] MIBI SPECT/CT imaging, high sensitivity and specificity values were achieved in preoperative localization of parathyroid adenomas as well as high detection rate was achieved in asymptomatic group. In all patients without contraindications, the use of IV contrast during [99mTc] MIBI SPECT/CT increased the rates of both the preoperative localization of adenomas and the detection in asymptomatic hyperparathyroids.

**Keywords:** Parathyroid adenoma, primary hyperparathyroidism, [99mTc] MIBI, SPECT/CT, 4D CT

## OP-157 [Endocrine Surgery]

# Our Surgical Experience in Insulinomas

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**Objective:** The aim of our study is to present our pre-operative findings and surgical experiences in 5 patients operated in our clinic due to insulinoma.

**Material and Methods:** All of our patients were diagnosed with insulinoma after being discussed and pre-operative evaluations at the council of multidisciplinary endocrine diseases between 2010 and 2016, and were referred to our clinic. The patients underwent routine prolonged fasting test for the purpose of diagnosis. No pathology was found in any patient in USG evaluations performed as imaging method. Computed tomography was able to clearly identify the mass in only one patient. Tomography was not performed in one patient due to contrast allergy. The mass could be demonstrated through MRI in 4 patients. Scintigraphy was applied in the patient in whom the mass could not be detected through MRI, and when the results of this examination

was reported as suspicious, angiographic calcium infusion test was performed. Per-operative USG was applied to the same patient in order to determine the mass localization and to evaluate its relationship with the surrounding tissues. Because there was discrepancy in terms of the localization determined in the MRIs performed in an external center and in our clinic, the correlation was provided in one patient with endoscopic USGGA-68 scintigraphy was performed in one patient because there were a large mass volume and liver metastasis in the MRI. All patients were operated with open surgery method and no complications were encountered.

**Results:** The mean age of the patients was 42.4 (31-59) years. The mean tumor diameter of the 5 patients was 1.6 cm (1.0-2.5 cm). Their locations in the pancreas and the surgeries performed are as indicated. The mean hospitalization period was 12.8 days (5-24 days).

**Conclusion:** Endocrine tumors of the pancreas are rarely seen and insulinomas are the most commonly encountered among them. The majority of patients are diagnosed clinically and the most common symptom is hypoglycemia. Approximately 10-15% of insulinoma cases are malignant and most frequently, peripancreatic lymph nodes and liver metastasis are observed. Because of the malignancy potential and endocrine activities in the patients, surgery is the first choice treatment modality. The aim of surgery in patients is to terminate pathological hormonal activity with safe surgical margins by leaving as much intact pancreatic tissue in place as possible. Therefore, if small lesions are not associated with the pancreatic duct, and if there is no suspicion of metastasis such as liver metastasis or peripancreatic lymph node involvement during imaging or surgery, they may be removed by enucleation regardless of localization. Enucleation was performed in 2 of 5 patients in our clinic, and although one of them was the patient with the biggest tumor volume, the procedure was successfully completed by using per-operative USG. Subtotal pancreatectomy was performed in two patients due to the association between the location of the mass and pancreatic canal, and the pylorus-preserving whipple procedure was performed in one patient due to the fact that a mass extending into the pylorus was seen in the intraoperative USG.

**Keywords:** Insulinoma, pancreatectomy, enucleation

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## OP-160 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# A Surprising Result in The Differential Diagnosis of Esophageal Mass: Bezoar

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**Introduction:** The diagnosis and treatment stages in a patient admitted due to complete obstruction clinic in esophagus were evaluated and the development of bezoar detected to cause the obstruction was discussed.

**Case:** An 85-year-old male patient was admitted to the internal medicine outpatient clinic with the complaints of progressive oral intake disorder, weight loss and dysphagia. No apparent pathology was found in the routine examinations of the patient who did not have any known disease history other than the drug use and regulated hypertension. Thoracic tomography, which was performed for further examination, revealed a thickening in the esophagus wall and mass lesion narrowing the lumen. The patient was transferred with the prediagnosis of a mass in the esophagus and oral intake disorder. It was observed in the first evaluation that the patient was dehydrated. It was found out in his history that he could not even drink water and became increasingly weak for the last two days. Since the findings were consistent with dehydration and nutritional deficiency, parenteral hydration and supportive treatment were started. Endoscopic evaluation was planned following the improvement in general condition. At the level of the thoracic esophagus, brown bezoar with a dark-sticky viscosity and completely occluding the lumen was observed in the EGD (esophagogastroduodenoscopy). The bezoar was broken into pieces and removed with endoscopic basket. In the evaluation performed after the procedure, endoscopic pathology was not found in the gastric and duodenum except for the hyperemia of the mucosa in the occluded esophagus segment. After the procedure, oral intake was gradually opened and the patient did not have any complaints. Two days later, control endoscopic evaluation revealed no lesion and mucosal pathology that could cause bezoar deposition on the entire esophagus. During the 6-month follow-up, the patient's complaints did not recur.

**Conclusion:** Bezoar, which causes complete obstruction in the esophagus, is quite a rare condition and may appear along with gastrointestinal motility disorders. In addition, phytobezoar cases, which occurs due to received drugs, are also reported in the literature. In the presented case, there were no predisposing factors and esophageal disease except for the advanced age. It was thought that this situation, which arises due to advanced age, dehydration and inappropriate food intake, grew with the foods taken later and caused total obstruction. As a result, dysphagia and oral intake insufficiency in the patient caused a deterioration in the general condition of the patient. In this patient, additional examination was not required to evaluate motility disorders since the dysphagia complaint disappeared completely after the treatment and no stenosis, and movement and shape deformity during the passage were seen through endoscopy. Bezoar in the esophagus should be considered in the differential diagnosis of a patient who is admitted with the complaints of dysphagia and esophageal obstruction. This should be remembered



especially in elderly patients. If these patients are not diagnosed and treated in time; although it is a condition that can be easily treated, fatal outcomes may occur.

**Keywords:** Esophagus, bezoar, obstruction

## OP-164 [Hepatobiliary Surgery]

# The Use of BCLC (Barcelona Clinic Liver Cancer) Classification in Patients with Hepatocellular Carcinoma

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**Objective:** The aim of this study is to investigate the use and the results of BCLC (Barcelona Clinic Liver Cancer) classification in the treatment planning of the patients with hepatocellular carcinoma.

**Material and Methods:** Between 2007 and 2016, 102 patients with HCC diagnosis were evaluated retrospectively and classified according to the BCLC criteria.

**Results:** The male/female ratio was 4.36 (83/19), the average age was 61.3 (18-88), and the average BMI (Body Mass Index) was 26.19 Kg/m<sup>2</sup> (17-39 Kg/m<sup>2</sup>). Twenty-three patients were HCV positive, 51 were HBV positive, and 5 were HBV and HCV positive. The mean tumor size was found to be 5.8 cm (0.8-20 cm). While the tumor was single in 67 patients, it was multicentric in 35 patients. There were 4 patients in Stage 0, 20 patients in Stage A, 35 patients in Stage B, 41 patients in Stage C and 2 patients in Stage D. In 3 of the 24 patients in stage 0 and stage A, liver transplantation was performed, resection in 15, and TACE (transarterial chemoembolization) in 6 of them. Two patients received sorafenib during the follow-up. Resection was performed in 30 of 35 patients in Stage B and TACE in 5 patients. Five patients received sorafenib during the follow-ups. Resection was performed in 13 of 41 patients in Stage C, TACE in 23 and RF (Radiofrequency Ablation) in 5 of them. Seventeen patients received sorafenib during the follow-ups. TACE was performed in 2 patients in Stage D. Life time was found as 47.5, 31.9, 29.3, 13.1 and 1.7 months for Stage 0, A, B, C and D, respectively. The durations of disease-free survival were 26.6, 24.7, 27.2, 10.9 and 1.7 months, respectively. The disease-free survival of the patients who underwent resection in Stage B was 28.78 months, the duration of life was 31.18 months; the disease-free survival was 17.74 months and the duration of life was 18.3 months in patients who received non-resection treatment. In Stage C, the disease-free survival of the patients who underwent resection was 10.94 months, the duration of life was 13.90 months; disease-free survival was 10.89 months and the duration of life was 12.86 months in patients receiving non-resection treatment.

**Conclusion:** Although liver resection is not recommended in Stage B and C in BCLC Classification, resection was performed in 85.7% of stage B patients and 31.7% of Stage C patients in our study. In particular, we observed that liver resection in Stage B patients increased disease-free survival and the duration of life. Liver resection should be the primary treatment option in this group of patients.

**Keywords:** Hepatocellular carcinoma, Barcelona classification, hepatic resection, transarterial chemoembolization, radiofrequency ablation

## OP-165 [Hepatobiliary Surgery]

# The Risk Factors Affecting Morbidity in Walled-Off Pancreatic Necrosis and The Effectiveness of Continuous Postoperative Lavage: Single Center Experience

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**Objective:** We aimed to evaluate the risk factors affecting morbidity in Walled-off pancreatic necrosis (WOPN) and to demonstrate the efficacy of continuous postoperative lavage in patients in whom endoscopic necrosectomy could not be performed or who were resistant to endoscopic necrosectomy.

**Material and Methods:** In this study, 19 of 28 WOPN patients who underwent surgical treatment or endoscopic necrosectomy in our hospital were included and divided into two groups; when acute pancreatitis (AP) diagnosis was first made (group 1, n=19) and until the time of operation or endoscopic necrosectomy (group 2, n=19). The patients were compared in terms of demographic features, surgical findings and complications.

**Results:** No statistically significant difference was found when the patients were evaluated in terms of hospital stay, complication, age, BMI (body mass index), WOPN diameter, ASA score, Ranson criteria, operation time, and the time from the first admission until the operation time or endoscopic necrosectomy ( $p>0.05$ ). The number of complications decreased as endoscopic necrosectomy was performed ( $B=-0.626$ , 95% CI: -0.956--0.296 and  $p<0.001$ ); in addition, the number of complications increased as the admission level of neutrophil lymphocyte ratio (NLR) increased ( $B=0.032$ , 95% CI: 0.009-0.055 and  $P=0.01$ ). Culture reproduction ( $B=0.669$ , 95% CI: 0.365-0.973 ve  $p<0.001$ ) and male gender ( $B=0.484$ , 95% CI: 0.190-0.778 ve  $p=0.003$ ) were the risk factors increasing the length of hospital stay.

**Conclusion:** Continuous postoperative lavage is an effective and safe surgical treatment method in WOPN. In addition; reproduction in culture, male gender, high NLR level, inadequate or failed endoscopic necrosectomy are the risk factors affecting poor prognosis.

**Keywords:** Necrosectomy, continuous postoperative lavage, walled-off pancreatic necrosis (WOPN)

## OP-166 [Hepatobiliary Surgery]

# The Evaluation of Subtotal Cholecystectomy Results in Difficult Gallbladder

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**Objective:** Laparoscopic cholecystectomy is the gold standard for the treatment of symptomatic gallstone disease. In cases where the gallbladder and Calot's triangle cannot be fully explored because of the factors such as technical reasons, advanced acute cholecystitis, adhesions due to previous abdominal surgeries and cirrhosis; subtotal cholecystectomy (SC) in which the gallbladder is partially resected is performed. In our study, we aimed to evaluate and present the postoperative early and late results of patients who underwent SC.

**Material and Methods:** Among 4003 patients who underwent cholecystectomy between 2011 and 2017 in our clinic, the files of 40 patients who underwent SC were reviewed retrospectively. Demographic characteristics (gender, age, BMI), preoperative indications, acute cholecystitis history, comorbidity, history of previous abdominal surgery, preoperative ultrasound (US) finding, length of hospital stay, operator, surgical technique, peritoneal adhesion index (PAI), pathology result, history of postoperative attack (acute cholecystitis, mechanical icterus, ERCP necessity), the presence of residual gallbladder (RGB) and calculus in the postoperative USG, preoperative and postoperative laboratory values (WBC, CRP, AST, ALT, tumor markers), postoperative surgical site infection (SSI), and postoperative incisional hernia status were evaluated in the patients.

**Results:** The study was conducted with a total of 25 patients, 13 (52%) of whom were female and 12 (48%) were male. The mean age was  $56.64\pm 12.25$  (range: 22-80) years. The mean BMI was found as  $31,04\pm 5,89$  (range: 22,5-44,6) kg/m<sup>2</sup>. HT was found in 36% (n=9) of the patients, DM in 28% (n=7), COPD in 8% (n=2) and CAD in 12% (n=3). The rate of previous abdominal surgery was 20% (n=5). Initially, 20% (n=5) of the cases were diagnosed with acute cholecystitis and 80% (n=20) were diagnosed with cholelithiasis. The mean duration of hospitalization was  $5.60\pm 2.50$  (range: 2-12) days. The mean value of PAI was found as  $2,44\pm 0,92$  (range: 0-3). Of the patients, 4% (n=1) were found as PAI: 0, 16% (n=4) as PAI: 1, 12% (n=3) as PAI: 2 and 68% (n=17) as PAI: 3. It was observed that a conversion to open surgery from laparoscopy was required in 72% (n=18) of the patients and laparoscopic surgery was performed in 28% (n=7). The rate of patients with RGB was observed to be 60% (n=15) in postoperative US and 33.3% (n=5) of these patients had calculus. It was seen that the presence of acute attack, the presence of mechanical icterus and the need for ERCP were not statistically significant according to RGB status in ultrasound ( $p>0.05$ ;  $p>0.05$ ;  $p>0.05$ ). The status of postoperative acute attack did not show statistically significant difference according to those who had and did not have calculus in RGB ( $p>0.05$ ). In the postoperative period, 20% (n=5) of the patients had incisional hernia and 20% (n=5) had CAE.

**Conclusion:** In terms of postoperative acute attack, mechanical icterus development, and ERCP requirement; no difference was found in patients in whom subtotal cholecystectomy was performed, in whom RGB was/was not seen in ultrasound, and who

had/did not have calculus in RGB. In our study; although we do not think that every patient who undergoes SC should be taken to complementary cholecystectomy, we recommend to give detailed information about the operations to the patients who undergo SC, and they should be followed-up in terms of early and late complications.

**Keywords:** Acute cholecystitis, subtotal cholecystectomy, difficult gallbladder

## OP-167 [Hepatobiliary Surgery]

# Hydatid Cyst of the Liver: Treatment and Follow-up of 118 Cases

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**Objective:** Hydatid cyst (HC) is an endemic disease encountered in our country and caused by the infection of the parasite eggs of *Echinococcus Granulosus*. Of cysts, 50%-70% are localized in the liver. It is often single and located in the right lobe. Medical treatment (albendazole), percutaneous drainage and surgery are the current treatment options in liver HC. The aim of this study is to evaluate the surgical and interventional procedures performed within 3 years and their results in patients with liver HC.

**Material and Methods:** A total of 118 patients admitted to our clinic with the diagnosis of liver cancer between 2015-2018 were retrospectively evaluated in terms of demographic, clinical, operative and postoperative follow-ups.

**Results:** Of the patients, 32 were male and 86 were female. The mean age of the patients was  $37.15 \pm 1.48$ . There was HC lesion in the right lobe in 70 of the patients, in the left lobe in 30 patients and in both lobes in 16 patients. Eight of these patients had concomitant hydatid cyst in the other organs. As for the distribution of synchronous liver HCs; 1 was observed in the right kidney, 1 in the right lower lobe of the lung, 4 in the spleen, 1 in the omentum and 1 in the mesenteric tissue. The mean cyst diameter was  $9.9 \pm 2.9$  in the examination considering the biggest cyst diameter in patients with multiple cystic lesions. There were more than one hydatid cyst in the liver of 33 patients. Laparoscopic partial cystectomy was performed in 18 patients; laparotomy and partial cystectomy were performed in 61 of them, and PAIR method was performed in 39 patients. Cholecystectomy was applied in one patient and splenectomy in 4 patients simultaneously. Primary repair was performed with 2/0 or 3/0 propylene or absorbable suture material in a total of 22 patients with encysted bile fistula, 18 in the right lobe and 4 in the left lobe. Only 2 of these 22 patients had to be treated with ERCP after bile leakage in the postoperative period. In the postoperative period; bile leakage, which was not intraoperatively detectable, was observed in 2 patients. These two patients were treated with ERCP and EST. In the postoperative period, wound infection occurred in 12 patients. They were treated with abscess drainage-dressing and antibiotherapy. The mean duration of hospitalization was  $7.02 \pm 2.89$  days. Abscess developed in the cyst pouch of three patients who underwent partial cystectomy in the early postoperative period and in 3 patients who underwent PAIR. In these patients, percutaneous abscess was treated with drainage and antibiotherapy. Recurrence developed in 11 patients in the late period. Treatment was provided with partial cystectomy in 4 of the 6 patients in whom recurrence developed after PAIR, with repeated PAIR procedure in 4 patients, and with PAIR who had previously undergone partial cystectomy in 5 patients due to recurrence.

**Conclusion:** Although it is common in our country, various methods such as medical, interventional and surgical treatment are applied in the liver hydatid cyst. Because PAIR or laparoscopic surgery is less invasive, they can be used safely in appropriate patients in experienced hands.

**Keywords:** Liver hydatid cyst, percutaneous treatment, surgical treatment, laparoscopic surgery

## OP-168 [General Surgical Diseases]

# Acute Cholecystitis Attacks Make Laparoscopic Cholecystectomy Difficult

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Laparoscopic cholecystectomy (LC) surgery performed under elective conditions for the treatment of symptomatic cholelithiasis is an important part of our surgical routine. Although cholelithiasis is frequently seen daily in our polyclinics with the complaints of non-specific dyspepsia and abdominal pain, it is commonly seen with acute cholecystitis. Although early cholecystectomy

(within a week) is recommended in patients with no prominent significant co-morbidity following the supportive treatment of acute cholecystitis; some factors related to patient (not feeling ready, not paying attention to the situation after the recovery of the painful picture), surgeon and institute (limited number of beds, patient density) lead to delayed surgical treatment and urgent admissions due to recurrent acute cholecystitis in this process. In our study, we retrospectively evaluated 188 laparoscopic cholecystectomy performed under elective conditions by the same surgeon in our hospital (Namık Kemal University Medical Faculty Hospital) between January 2015 and December 2017. The patients who had acute cholangitis and/or had preoperative ERCP, the patients undergoing major upper abdominal surgery, the patients undergoing emergency cholecystectomy, and the patients with ASA IV and V were excluded. The patients who were admitted to the emergency service due to acute cholecystitis during the last 6 months before the operation—also significantly related to the number of applications—had significant ultrasonographic gallbladder wall thickening (more than 4 mm). In this group, it was found that the duration of operation, as a marker of the difficulty of LC surgery, was prolonged (70.38 minutes, the mean of the whole group was 52.15 minutes); the rate of conversion to open surgery was higher and more lavage fluid was used. In addition, 1 patient with Strasberg E2 injury (hepatitis duct complete incision) and 3 patients with Strasberg A injury (cystic duct fistula) were also included in this group. We believe that the morphological changes that the acute cholecystitis attack creates in the gallbladder wall make the LC surgery more difficult and they may increase the risk of biliary injury by extending the duration of operation, and complicating the differentiation of the gallbladder anatomy. Operation of patients without new acute episodes after the supportive treatment of acute cholecystitis may lead to safer LC surgery.

**Keywords:** Acute cholecystitis, elective cholecystectomy, laparoscopic cholecystectomy difficulties, delayed cholecystectomy

## OP-169 [Colon and Rectal Surgery]

# Investigation of Defecography in Treatment Planning in Obstructive Defecation Syndrome

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**Objective:** Besides being secondary to the pathologies such as rectocele and rectal prolapse; constipation due to pelvic floor dysfunction may also be caused by the failure of the relaxation of the pelvic floor during defecation. In anorectal physiological studies, puborectal and external anal sphincter relaxations are not achieved and anatomic defects can be detected. Defecography allows the functional evaluation of rectal discharge by fluoroscopic means. Quantitative examination of rectal emptying is important in patients with the symptoms of “obstruction of defecation”. It shows anatomical defects such as rectal intussusception, rectocele and megarectum.

**Material and Methods:** The study included 38 patients diagnosed with obstructive defecation syndrome in the proctology unit between January 2015 and August 2017. The examinations performed to reveal the etiological causes, and the etiology of defecation syndrome were evaluated retrospectively from the files and electronic records. The treatment plan of the patients who underwent defecography, and defecography results were retrospectively reviewed from files and electronic records.

**Results:** Of the patients in our study, 14 were male and 24 were female; the mean age was 43.3. All patients underwent manometry, five patients underwent endoanal ultrasound examination, and defecography was performed in 18 patients. The etiology of obstructive defecation syndrome included disorder in the sensation of rectal filling ((idiopathic megacolon (4/38), rectal sensitivity loss (7/38)), outflow obstruction ((inhibition of the internal sphincter disorders (2/38), relaxation failure of the pelvic region striated muscles (9/38))), mechanical outflow obstruction ((rectal intussusception (1/38), enterocele (1/38)), disorder in the defecation power ((rectocele (8/38), perineal prolapse (4/38), and total rectal prolapse (2/38)). Nine of the patients who underwent defecography had normal pathological results, and nine of them had pathological findings. Surgical treatment was recommended for 6 (66.7%) of the patients who were found to have pathology. Medical treatment was recommended for all of the patients with normal defecography.

**Conclusion:** Studies have shown that ODS is mostly caused by different abnormalities of the rectum and the pelvic floor. The treatment of obstructive defecation syndrome requires the correct examination of the underlying pathologies and correct strategy. It is of great importance to define the main cause of ODS, since poor patient selection leads to dissatisfaction with the functional outcomes after surgery. Defecography is accepted as the gold standard for the diagnosis and for staging of anterior or posterior rectocele especially for the evaluation of pelvic floor diseases. In one study, rectocele was found in defecography in 60% of the patients diagnosed with obstructive defecation syndrome. In our study, the rate of surgical treatment of the patients in whom pathology was found in the defecography was statistically significantly higher than the patients with normal defecography. The most important step in treatment planning for obstructive defecation syndrome is to reveal the etiological cause. Therefore; defecography can be used to reveal the anatomical disorders, but it can not be used alone, though it is a guide in the treatment.

**Keywords:** Obstructive defecation syndrome, defecography, rectocele, anal manometry

## OP-170 [Colon and Rectal Surgery]

# The Results of Conversion from Laparoscopy to Open Surgery in Colon Cancer Patients Over 70 Years of Age

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**Objective:** The aim of this study is to evaluate the incidence, risk factors and outcomes of the conversion from laparoscopy to open surgery in colorectal cancer patients over 70 years of age.

**Material and Methods:** All patients who underwent laparoscopy for colorectal cancer between January 2006 and January 2018 were included in the study. These cases were examined in 3 groups: those over the age of 70 years in whom the intervention was converted to open surgery (O>70), those under 70 years of age in whom the intervention was converted to open surgery (O<70) and those over the age of 70 years in whom the procedure was completed with laparoscopy (L>70). The results between the O>70 group and the other two groups were compared.

**Results:** Among 700 patients, there were 27, 129 and 52 patients in O>70, L>70 and O<70 groups, respectively. The conversion to open surgery was significantly higher in O>70 group than in O<70 group (17.3% and 9.6%, p=0.011). In the O>70 group, the number of female patients was higher than in the other two groups. However, no statistically significant difference was observed between the O>70 and O<70 groups when the causes of conversion to open surgery were compared. Although the female gender and T4 tumor were significant risk factors in univariate analysis for the conversion to open surgery in the group of those above 70 years of age, not every variable in multivariate analysis was significant. The intraoperative results (duration of operation, multiple organ resection rate, intraoperative bleeding, and the need for transfusion) in the group over 70 years of age in whom the intervention was converted to open surgery were worse than those in whom laparoscopy was not converted to open; but they were similar with the group under 70 years of age, except for the duration of operation. Surgical site infection, wound site infection, evisceration and reoperation rates were statistically significant and higher in the group of patients over 70 in whom the procedure was converted to open than in the group of patients in which it was not. Surgical wound infection and evisceration rates were higher in the patients over 70 years of age. In the 70 years of age, the T-phase, the number of malignant lymph nodes and the perineural invasion rate were higher in the converted group than those in whom conversion was not required. The total number of lymph nodes removed in these two groups was similar.

**Conclusion:** The rate of conversion was higher in the older patients. In the group of older patients, in whom the intervention is converted to open; the duration of operation, multiple organ resection, intraoperative bleeding, transfusion necessity, surgical site infection, wound site infection, evisceration and reoperation rates are worse. In the group of elderly patients in whom the procedure is converted to open, the tumor is in more advanced stages. In patients older than 70 years, surgical wound infection and evisceration rates are higher than the patients older than 70 years. The number of lymph nodes removed does not decrease in patients in whom the operation is converted. Therefore, conversion to open surgery may not alter the oncological quality of surgery.

**Keywords:** Colon ca, elderly patients, conversion to open surgery, laparoscopy

## OP-171 [Colon and Rectum Surgery]

# Clinicopathologic Importance of Colorectal Medullary Carcinomas

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**Objective:** Medullary carcinomas (MC) are tumors that do not show glandular differentiation and have a solid growth pattern, and they constitute less than 1% of colorectal carcinomas. Due to their rarity, they may be confused with neuroendocrine tumors, metastases and lymphomas. Microsatellite instability (MSI-H) is found high in colorectal MCs. Lymph node involvement and distant organ metastasis rate were reported to be lower than those of adenocarcinoma, which has the same degree of differentiation. Therefore, pathological diagnosis of MC is important in terms of follow-up and treatment.

**Material and Methods:** Between January 2011 and December 2017, 434 patients who were operated by the same surgical team due to colorectal cancer in American Hospital General Surgery Clinic were retrospectively reviewed. Thirteen patients diagnosed with MC were evaluated in terms of demographic characteristics, location of tumors, type and characteristics of surgery, pathological features and survival.

**Results:** Of the patients diagnosed with MC, 10 (76.9%) were female, 3 (23.1%) were male, and the mean age was 59±18 years. As for the tumor localizations; it was in the right colon in 9 (69.2%) patients, in the left colon in 2 (15.4%) patients, in the transverse colon in 1 (7.7%) patient and in the rectum in 1 (7.7%) patient. Four (30.8%) patients were operated under emergency conditions due to the signs of obstruction. Seven (53.8%) patients were operated laparoscopically and 5 (38.5%) with open surgery. The procedure was started with laparoscopic surgery but it was converted to open surgery due to the size of the tumor in 1 (7.7%) patient. When all the patients who underwent colorectal cancer surgery were examined; while the rate of laparoscopy was 83%, this rate was found to decrease to 53.8% in patients of colorectal MC. In the pathology reports, low differentiation was found in 9 (69.2%) patients and moderate differentiation was found in 4 (30.8%) patients. The mean tumor length was 7.1±3 cm and the mean tumor volume was 18.3±16.1 cm<sup>3</sup>. Ten patients (76.9%) had T4, 2 patients (15.3%) had T3 and 1 (7.7%) had T1 tumors. While lymph node positivity was found in 5 (38.4%) patients, it was seen that there was no lymph node involvement in 8 (61.6%) patients. Seven patients had lymphatic invasion, 5 patients had perineural invasion, 5 patients had tumor perforation and 2 patients had venous invasion. MSI-H was determined in all 4 patients who were evaluated for microsatellite instability. Three (23.1%) patients died during the mean follow-up period of 44±21 months. While the overall survival rate was 80% in patients who we operated due to colorectal cancer, it was found to be 67% in patients diagnosed with MC.

**Conclusion:** Medullary carcinoma is a rare type of colorectal tumors. They are the tumors that are mostly located in the right colon, have a high size and volume and that are mostly defined as T4. This situation complicates minimally invasive procedures and reduces the rate of laparoscopy. In addition; because the MSI-H ratio is high, making the differential diagnosis carefully and pathological diagnosis of MC are important in terms of the follow-up and treatment.

**Keywords:** Colorectal, medullary carcinoma, microsatellite instability

## OP-172 [Colon and Rectum Surgery]

# The Effect of Neoadjuvant Short-term Radiotherapy and Long-term Chemoradiotherapy on the Pathologic Response in Locally Advanced Rectal Cancer

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**Objective:** In recent years, long-term neoadjuvant chemoradiotherapy (nCRT) or short-term neoadjuvant radiotherapy (nRT) options have been introduced in addition to the surgical approach which is accepted as the standard for rectal cancer treatment. Studies have shown that both treatment options have positive effects on local recurrence, the rate of sphincter preserving surgery, stage and pathological regression. In our study; the effects of these options, which are accepted as the standard treatment in locally advanced rectal cancer, on pathological regression were compared.

**Material and Methods:** One hundred and forty-six patients who were operated for rectal cancer between January 2011 and September 2017 were evaluated retrospectively. Long-term nCRT was applied in 55 of 80 patients with locally advanced (T3/T4) and/or lymph node involvement (N+), and only short-term nRT was applied in 25 patients. While evaluating the response to neoadjuvant therapy; a comparison was made between preoperative clinical staging and postoperative pathological staging. The absence of cancer cells in the resection material was defined as pathological complete response (pCR), and T-stage regression (TR) and/or N-stage regression (NR) was defined as partial response (PR). Demographic characteristics, pathology results, and response to neoadjuvant therapy were evaluated in the patients. The pathological responses to treatment were compared in the group receiving only short-term nRT and the group receiving long-term nCRT. Statistical analysis was performed with SPSS version 20.0.

**Results:** No statistically significant difference was found in terms of the age, gender and BMI values of the patients included in the study. The tumor had a distal localization (nRT: 12, nCRT: 37) in 49 (61%) of the patients, a middle localization (nRT: 10, nCRT: 16) in 26 (33%) patients, and a proximal rectum localization in 5 (6%) patients (nRT: 3, nCRT: 2). During clinical staging, the stage was T2 in 2 (2.5%) patients, T3 in 63 (78.7%), and T4 in 15 (18.8%). While lymph node metastasis was not detected in 14 (17.5%) patients, it was detected in 66 (82.5%) patients. Sphincter preserving surgery was able to be performed in twenty-four (84%) patients in the nRT group and in 45 (81.8%) patients in the nCRT group. In the short-term nRT group; pCR was not received in 2 (8%) patients, PR in 12 (48%) patients, and pathological response in 11 (44%). In the long-term nCRT group, it was seen that pCR was not received in 6 (10.9%) patients, PR in 32 (58.2%), and no response in 17 (30.9%). There was no statistically significant difference between the two groups in terms of response to treatment.

**Conclusion:** Neoadjuvant treatments for locally advanced rectal cancer are used to increase the local control, pathologic regression and sphincter preserving rates along with surgical treatment. However, in the selection of neoadjuvant therapy, no consen-

sus between short-term and long-term RT could be reached. Although there was no statistical difference between nRT and nCRT groups in our study, there is a need for prospective and randomized studies including large patient series.

**Keywords:** Neoadjuvant, pathological response, radiotherapy

## OP-173 [Colon and Rectum Surgery]

# The Comparison of Patients Undergoing Extracorporeal Anastomosis and Intracorporeal Anastomosis in Laparoscopic Right Column Resections: A Two-Center Analysis

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**Objective:** The aim of this two-center study was to compare the clinical data of patients undergoing extracorporeal anastomosis and intracorporeal anastomosis in patients in laparoscopic right colon resections performed for colon cancer.

**Material and Methods:** The patients who underwent laparoscopic right hemicolectomy with the diagnosis of colon cancer between January 2012 and June 2017 in İnönü University School of Medicine, Department of Gastroenterology Surgery and Health Sciences University Kartal Training and Research Hospital, General Surgery Clinic were included in this study. The data of the patients were collected retrospectively by using the file scanning method. The patients over 80 years of age, the patients in whom the procedure was converted to open surgery, the patients with pre-operatively known distant metastasis and the patients whose data were not fully accessible were excluded from the study. The patients undergoing intracorporeal anastomosis were included in the Group Intra and the patients undergoing extracorporeal anastomosis were included in the Group Extra. In our study, all the patients in Group Intra were included in the study from İnönü University and all the patients in Group Extra from Kartal TRH. The groups were compared in terms of demographic data (age, gender), preoperative clinical data (BMI, ASA, TM localizations), intraoperative data (Duration of surgery, Resection Width, number of staplers, Bleeding and Transfusion Amounts, Total Incision sizes), postoperative data (Need for Intensive Care and Duration, Need for Postoperative Transfusion, Postoperative Complications, duration until the start of Oral uptake, Postoperative Hospitalization Period, Reoperation Need, Return to Work), pathological data (Size of specimen, Number of Lymph Nodes removed) and long-term follow-up data (Local Recurrence, Distant Metastasis and Overall Survival).

**Results:** A total of 46 patients from both centers were included in the study. Twenty of the patients were in the Group Intra and 26 in the Group Extra. When the demographic and preoperative data were analyzed; the mean age of the patients in the Group Intra ( $52.9 \pm 15.3$  vs  $63.6 \pm 11.2$ ,  $p < 0.05$ ) was lower, as well as the BMI ( $25.3 \pm 4.5$  vs  $28.3 \pm 5.8$  kg/m<sup>2</sup>,  $p < 0.05$ ) and ASA were found to be lower. Intraoperative data showed that the bleeding amount in the Group Intra ( $47 \pm 31.1$  vs  $92.9 \pm 63.8$  ml,  $p < 0.05$ ) was less, and the total length of the total incision was shorter ( $8.6 \pm 5.2$  vs  $22.8 \pm 13.1$ ). In the early postoperative period, it was found that the duration to initiate the oral uptake in the Group Intra ( $2.2 \pm 1.4$  vs  $4 \pm 1.1$  days) and the duration of hospitalization were shorter ( $5.3 \pm 2.1$  vs  $7.9 \pm 3.2$ ,  $p < 0.05$ ); however, the duration of stay in the intensive care unit was longer ( $1.1 \pm 0.4$  vs  $0.3 \pm 0.6$  days,  $p < 0.05$ ). It was found in the pathological findings that more lymph nodes were removed in the Group Extra ( $31.9 \pm 13.3$  vs  $23.3 \pm 7.3$ ,  $p < 0.05$ ). There were no statistically significant differences between the groups in terms of the other examined parameters.

**Conclusion:** It can be said according to the findings of our study that lower intraoperative bleeding, faster transition to oral feeding and shorter hospital stay are achieved in intracorporeal anastomoses in comparison to extracorporeal anastomosis in patients undergoing laparoscopic right hemicolectomy.

**Keywords:** Minimally invasive, cancer, right colon, hepatic flexura, cecum, ascending colon

## OP-174 [Breast Diseases and Surgery]

# The Surgical Management of the Patients with BRCA 1/2 Mutation Breast Cancer in the Turkish Population

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**Objective:** Oncologic safety of breast-conserving surgery (BCS) is controversial in breast cancer patients with BRCA mutation. For this reason, we investigated the locoregional recurrence rates in mutation-carrier patients with the diagnosis of breast cancer in our clinic.

**Material and Methods:** Sixty-six BRCA 1/2-related breast cancer patients who underwent mastectomy (n=31; 20 unilateral and 11 bilateral) between March 1993 and June 2015, or in whom BCS (n=35) was performed were analyzed retrospectively. Demographic characteristics, tumor characteristics, the presence of local recurrence and/or distant metastasis and contralateral breast cancer (CBC) were evaluated.

**Results:** The median age was found as 46.5 (20-75). While BRCA-1 mutation was found in 50 (77%) of 65 patients and BRCA-2 mutation was detected in 15 patients (23%). While invasive ductal carcinoma was seen as invasive cancer in most of the patients (n=62, 95%), ductal carcinoma in situ (DCIS) was detected in 3 patients (5%). Of the patients with invasive cancer, 16 (24%) had stage 1 disease, 22 patients (34%) had stage 2 disease, and 23 patients (35%) had stage 3 disease. While the tumor estrogen and/or progesterone receptors were positive in 30 (49%) of the patients, HER-2/neu expression was positive in 26% (n=16) of the patients and triple negative tumors were found in 24.5% (n=15). A high Ki67 score was found in most invasive tumors (Ki67 score >20%, 85%; Ki67 >50%, n=61). In the mean follow-up period of 46 months (14-272), ipsilateral breast tumor recurrence (IBTR) developed in 4 (12%) of patients who underwent BCS. Recurrence was seen in one of the patients who underwent BCS. Demographic characteristics of patients with IBTR. The pathology of 2 patients in whom IBTR developed was DCIS and the estrogen and/or progesterone receptors were negative in these patients. In the mean follow-up period of 84 months (36-262), IBTR was found in 3 of 18 patients (4%) who underwent BCS. In addition, contralateral breast cancer was detected in 3 patients (4.5%) in 8th and 29th months, respectively. While five-year disease-free survival and disease-specific survival for all patients with invasive cancer were 63% and 100%, respectively, the 5-year disease-free survival rate for the patients treated with BCS was 86%.

**Conclusion:** Similar to other publications, our data also show that the risk of IBTR increases after BCS in BRCA1/2 mutation carriers. Similarly, the risk of contralateral breast cancer also increases in this group. Therefore, when mutation-carrier patients want a breast-conserving surgery, the probability and risks associated with new tumor development should be discussed in detail with the patients.

**Keywords:** Breast, BRCA, cancer

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## OP-175 [Breast Diseases and Surgery]

# The Effect of Intraoperative Ultrasonography Guidance and Real-time Specimen Imaging on Intact Surgical Margin in Oncoplastic Breast Surgery

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**Objective:** Oncoplastic breast surgery (OBS) is one of the current treatment options for the surgical treatment of breast cancer. The surgical margin is the most important factor for oncological and cosmetic success. Since the surgical field is filled with different glandular flaps in OBS, the determination of positive margin in permanent sections constitutes a complete catastrophe for the patient and the surgeon. Intraoperative ultrasound (IU) guidance and standard cavity sampling are useful methods for obtaining negative surgical margins. While IU guidance provides real-time surgical margin assessment, cavity sampling can significantly reduce the resection rates. The aim of our study is to investigate the accuracy and sensitivity of the specimen sonography in terms of the determination of positive margin and cavity in IU guided oncoplastic surgery, and to design a selective cavity shaving algorithm to reduce the excess breast volume, especially in the presence of small breast structure.

**Material and Methods:** One hundred and ten patients who underwent oncoplastic surgery under IU guidance were identified. Perioperative real-time sonographic surgical margin examination performed by the surgeon, the sonographic and macroscopic evaluation of each boundary of the specimen, the confirmation of no residual tumor tissue through sonographic analysis of the tumor bed, and the cavity sampling from six separate borders of the tumor bed for permanent pathological evaluation were the standard steps of our methodology. The method was the same regardless of whether the tumor was palpable or non-palpable. Permanent pathological analysis revealed no tumor in the surgical margins stained for invasive tumors, and as for the ductal carcinoma in-situ; the lack of tumor up to >2 mm from the surgical margin was considered to be sufficient.



**Results:** The sensitivity of IU in determining the tumor localization was 100% (110/110 cases). Specimen sonography detected negative surgical margin in 94.54% (104/110) of the patients in the first resection. Surgical margin positivity rate was found to be ~2.12% (14 out of 660 surgical margins that were evaluated) in the permanent analyses of the specimens. Positive surgical margins were determined with the accuracy of ~71.42% (10/14) through specimen sonography. In 2 patients with negative surgical margins (~1.92%), permanent section analysis revealed surgical margin positivity. A second intervention was required because of tumor cells were detected in cavity sampling in three patients (~2.27%). The permanent pathologic section results of these patients revealed invasive lobular carcinoma in one patient and ductal carcinoma in situ in two patients.

**Conclusion:** IU-guided oncoplastic surgery allows oncological safety and recovery in cosmetic results with minimal tissue loss and optimal excision volumes, especially in women with small breast structures. It is indispensable to obtain the negative surgical margin during the first surgical procedure in the procedures such as especially oncoplastic surgery, which may cause a major problem with re-excision requirement and make the patient a candidate for mastectomy. IU provides the possibility of better cosmetic results with the potential to reduce the re-excision rates and allow for selective cavity shaving by predicting positive surgical margins. However, the accuracy and sensitivity of sonography should be questioned in the presence of DCIS and lobular histology in selective cavity shaving.

**Keywords:** Oncoplastic surgery, intraoperative ultrasound, cavity sampling

## OP-176 [Breast Diseases and Surgery]

# Postoperative Physical Activity and Balance Changes in Patients Undergoing Surgery for Breast Cancer

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**Objective:** The aim of our study is to evaluate the postoperative physical activity limitations and balance changes in patients operated for breast cancer through objective and subjective criteria compared to control individuals.

**Material and Methods:** One hundred and twelve patients who were admitted to the General Surgery Department of Umraniye Training and Research Hospital of the Health Sciences University for breast cancer between January 2008 and December 2016, who underwent sentinel lymph node biopsy and/or with axillary lymph node dissection through modified radical mastectomy or breast conserving surgery, and who met the inclusion and exclusion criteria were included in the prospective, cross-sectional and single-center study. Of the 112 patients included in the study, 77 underwent BCS and 35 underwent MRM. Voluntary consent form was taken from all the patients to participate in the study. The patients with impaired balance, additional physical defect that can affect the balance, congestive heart failure, severe arrhythmia, asthma, advanced chronic obstructive pulmonary disease, Parkinson's disease, multiple sclerosis, dementia, rheumatologic diseases such as rheumatoid arthritis and ankylosing spondylitis, polio sequelae, hip or knee joint prosthesis, a history of diabetic and neuropathic familial/genetic neuropathies, diagnosed malignancy, and a history of gynecologic surgery in the last 5 years were excluded from the study. The study was initiated after the hospital ethics committee approval was obtained, and the patient's demographic information, type of surgery, and the macroscopic and microscopic pathology results were obtained from the Health Information System 5. The patients were called up one by one and invited to the hospital. The balance disorder of the patients was evaluated through a 17-question questionnaire prepared by the Physical Therapy and Rehabilitation Clinic of our hospital for this study. All interviews with the patients were made by the physician and recorded.

**Results:** The mean age was 52±10.9 (18-90) years. Of the 112 patients who participated in the study, 75 (68.8%) were treated with Breast Conserving Surgery (BCS) and 31.2% with Modified Radical Mastectomy (MRM). The average period after the operation was 40 months. When the pathology results of our patients were evaluated, 73% were reported as invasive breast carcinoma (non-specific type-NST). Thirteen percent of them were found to be invasive lobular carcinoma and the remaining ones were subgroup tumors. In the frequency distribution of daily physical activity criteria, 37 (33.1%) out of 112 patients took 4 points and over, while 75 (66.9%) were under 4 points. Seventy-five people who were under 4 points after the operation were considered inadequate in terms of physical activity. When the balance changes were considered, the average was 5.94±0.82 in the patients who underwent breast conserving surgery, and it was 5.94±0.41 in those who underwent modified radical mastectomy. There was no significance between the operation and the balance change postoperatively, because the f value was 3.116 and in response to this, the p value was 0.078.

**Conclusion:** In patients undergoing surgery for breast cancer, physical activity was restricted and quality of life decreased, independent of the type of operation. It was found that there was no significant difference in the operation-related balance changes.

**Keywords:** Breast cancer, physical activity, balance changes

## OP-177 [Breast Diseases and Surgery]

# The Effect of Clinicopathological Features on Non-sentinel Lymph Node Involvement in Breast Cancer Patients

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**Objective:** Axillary lymph node involvement is the most important prognostic factor for breast cancer. For this purpose, sentinel lymph node (SLN) biopsy is necessary to determine the prognosis and the need for adjuvant therapy with an accurate staging. Complementary axillary lymph node dissection (cALND) may not be performed when SLN is negative. However, cALND is still controversial in SLN-positive patients with early stage breast cancer (ESBC). Because non-SLN involvement is not observed in 40-60% of SLN-positive patients in the studies. Considering the fact that prophylactic ALND does not provide additional benefit to the patients and may rather cause additional morbidities such as especially lymphedema, paresthesia, pain and limitation of movement, it is important to determine the patients who will undergo AD. This study was planned to investigate the association of clinicopathological features with non-SLN involvement in SLN-positive ESBC patients.

**Material and Methods:** The records of 289 patients who underwent surgery due to ESBC between March 2014 and April 2017 were retrospectively reviewed. Seventy female patients who were between 21 and 80 years of age, who had negative axilla clinically and radiologically but had macrometastasis in SLN were included in the study. The patients who had micrometastasis or isolated tumor cells in the SLN, and in whom more than six SLNs were removed were excluded from the study. The patients were divided into two groups as those with non-SLN involvement (Group 1) and as those with SLN involvement (Group 2). Both groups were compared in terms of the data such as age, tumor side, localization, multilocalization, pathological tumor size and type, ductal carcinoma insitu (DCIS), histological grade, estrogen and progesterone receptor, Cerb2, Ki 67, lymphovascular invasion (LVI), perineural invasion, SLN marking method, the number of SLN removed, extra capsular spread (ECS) and SLN metastasis rate. SPSS 18.0 was used for statistical analysis.  $p < 0.05$  was considered significant.

**Results:** The mean age of the patients was  $51.42 \pm 12.8$ . While non-SLN involvement was not observed in thirty-two (45.7%) patients, there was involvement in the remaining axilla of 38 (54.3%) patients. The mean number of SLN and total axillary lymph nodes removed were  $2.92 \pm 1.42$  and  $19.25 \pm 8.44$  in all patients, respectively, and there was no significant difference between the groups. The tumor was in the right breast in 28 (40%) patients and in the left breast in 42 (60%) patients. The mean tumor diameter was  $2.40 \pm 0.98$  cm. Breast conserving surgery was performed in 49 (70%) patients and modified radical mastectomy was performed in 21 (30%) patients. In univariate analyses; multilocalization, ECS, the number of SLN removed, and SLN metastasis rate were statistically significant in terms of non-SLN involvement ( $p < 0.05$ ). The presence of DCIS was found to be negatively correlated. The lack of multilocalization and the lack of DCIS in multivariate analyses were evaluated as the independent predictors of axillary involvement ( $p < 0.05$ ).

**Conclusion:** The results of our study alone are not sufficient to predict axillary involvement in patients with SLN-positive ESBC. However, careful examination of the clinicopathological features may help us to decide not to perform cALND in patients in whom a sufficient number of SLNs are removed, who have low rate of SLN metastasis, and in whom especially DCIS accompanies, but there are no multilocalization and ECS.

**Keywords:** Lymph node metastasis, breast cancer, sentinel lymph node

## OP-178 [Breast Diseases and Surgery]

# Predictive Factors Associated with Axillary Lymph Node Involvement in Breast Cancer

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**Objective:** Axillary lymph node metastasis (ALNM) has been considered to be one of the most important prognostic factors for the general and disease-free survival of patients with breast cancer. The identification of breast cancer patients at risk of ALNM is important for the treatment plan. The aim of this study was to determine the factors affecting axillary lymph node involvement in breast cancer.

**Material and Methods:** The characteristic and pathological properties of 131 breast cancer patients who underwent breast conserving surgery and axillary lymph node dissection or modified radical mastectomy were reviewed retrospectively.

**Results:** ALNM was detected in 60% (n=79) of the patients. In univariate analysis, histological grade, tumor size, lymphovascular invasion, perineural invasion, HER2 positivity and large intraductal component were found to be highly risky for ALNM. In multivariate analysis, increased tumor size (OR: 0.2, p<0.030) and the presence of lymphovascular invasion (OR: 0.2, p<0.001) were found as independent factors for positive ALNM.

**Conclusion:** In our study, the presence of lymphovascular invasion and increased tumor size were found to be the independent predictive factors for axillary lymph node involvement. In univariate analysis, histological grade, tumor size, lymphovascular invasion, perineural invasion, HER2 positivity and large intraductal component were found to be highly risky for ALNM. The patients with these factors may be included in a higher risk group in terms of lymph node involvement, but more data are needed to identify the factors that may be helpful in decision-making for axillary lymph node dissection.

**Keywords:** Breast cancer, axillary lymph node metastasis, prognostic factors, axillary lymph node dissection, modified radical mastectomy

## OP-179 [Breast Diseases and Surgery]

# The Evaluation of Changes in the Management of the Axilla After Published Studies on Breast Cancer Patients with Positive Axillary in Turkey

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**Objective:** There have been significant changes in breast surgery and axilla surgery since the recent studies on breast cancer. Adoption to innovations in surgery and the process of leaving the old habits spread over a long period of time. After these studies, it was thought that this survey study was necessary to determine the extent to which the habits of the surgeons interested in breast surgery have changed and to determine the extent of the effects of these studies on the surgeons.

**Material and Methods:** General surgeons interested especially in breast surgery were requested to fill out a questionnaire that was created for the axilla management in early stage and locally advanced breast cancer patients between November 1, 2017 and February 1, 2018. These questionnaires were analyzed in SPSS program.

**Results:** Eighty-four general surgeons participated in the study. Thirty-one (36.9%) of them were working in university hospitals and the others in training and research, state and private hospitals. While 80% of the surgeons who treated a small number of breast cancer cases (<100) in one year completed the axillary curage in a patient who underwent breast-conserving surgery and received chest wall or whole breast irradiation in early stage breast cancer in the case of 1 or 2 positivity of the sentinel lymph node; 54% of the surgeons who treated more than 100 breast cancer cases in one year completed the axillary curage (p: 0.009). While the axillary curage was completed in 65% of the patients in centers where more than 100 breast cancer cases with 1 or 2 lymph node involvements were treated in early stage breast cancer, this rate was 89% in the centers where fewer (<100) breast cancer cases were treated (p: 0.045). Of the participants, 89.3% (n: 75) were initially axilla positive and neoadjuvant chemotherapy (NACT) was performed, and later, sentinel lymph node biopsy was performed in patients who became axilla negative clinically. While the rate of those who used blue stain technique for this reason was 46.1% (n: 35), it was 48.7% (n: 37) in those who used the combined method (blue stain+lymphoscintigraphy). Of these, 57.1% (n: 44) reported that they removed at least 3 sentinel lymph nodes. In the case that the intraoperative pathology of sentinel lymph node was reported negative after NACT, 52.6% (n: 41) of the surgeons always stated that they performed level 1-2 axillary curage. While 23.8% (n: 20) of the participants indicated that they had the axillary metastatic lymph nodes marked before NACT, 96.2% of the participants stated that they performed this procedure with the help of clips.

**Conclusion:** According to recent studies on axilla approach, axilla-sparing surgery has become common, whether it is early-stage breast cancer or locally advanced breast cancer (received NACT). In this study, it was observed that the surgeons in our country avoided curage in clinically negative axilla especially in patients with locally advanced breast cancer, providing they have received radiotherapy.

**Keywords:** Questionnaire, sentinel lymph node, early stage breast cancer, locally advanced breast cancer, axillary lymph node dissection

## OP-180 [Breast Diseases and Surgery]

# Optimization of Aesthetic Appearance in Simultaneous Breast Reconstruction

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**Objective:** The aim of early stage breast cancer treatment is breast conserving surgery+satisfactory reconstruction in terms of cosmetics. It is stated in the literature that simultaneous reconstruction allows patients to spend this difficult period comfortably in both medical and psychosocial terms for the last 15 years. A reconstruction method, in which the breast skin can be protected, the entire breast can be shaped, and the anatomical contour of the inframammary crease can be emphasized, facilitates the work of plastic surgery. As the patient never sees her breastless state; while providing cancer control and aesthetics, things become much more complicated.

**Material and Methods:** One hundred and fifty patients who underwent skin-preserving mastectomy and simultaneous implant repair with the general surgery clinic between 2012 and January 2018 were compared in terms of major or minor complications in patients undergoing repair with implant or tissue expander, the incisions preferred, the differences of mastectomy with diathermy or with sharp dissection, and in terms of the effects of body mass index on implant repair.

**Results:** Major complications (implant exposition) were observed in 18% of the patients and minor complications (flap necrosis, wound healing problems) in 24%. Lollipop incision or vertical incision was preferred in 50% of patients. Lymphedema-like findings were frequently observed in mastectomy flaps in patients with high body mass index in the early postoperative period. Complications related to the flap were observed more frequently in patients with excised mastectomy material >600 g or sternal notch-NAC distance >28 cm. Of the patients, 25 were repaired with tissue expander flap or the portion corresponding to the lower pole of the breast implant was repaired with rectus abdominis adipofascial flap and serratus anterior muscle flap. The breast lower pole in 32 patients was repaired by adapting the TIGR Matrix® (composite vicryl biomesh) to the pectoral muscle. Repair the implant in a total of 18 patients failed and a preserving operation was performed with a latissimus dorsi myocutaneous flap. In 26 patients, the the procedure got to the phase of nipple reconstruction, and at this stage, the patients preferred nipple tattoo with micropigmentation. The mean follow-up period was 12 months.

**Conclusion:** It is very difficult for the patient and the doctor to reach satisfactory results since the reconstruction of the breast is performed in a condition that the patient does not see herself without breast.

**Keywords:** Simultaneous breast reconstruction, aesthetics, optimization

## OP-181 [Breast Diseases and Surgery]

# Diagnosis and Treatment Approaches in Patients Diagnosed with Paget's Breast Disease

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**Objective:** In our study, we aimed to present our diagnosis and treatment approaches in patients diagnosed with Paget's Disease of the breast.

**Material and Methods:** The medical records of 50 patients who were diagnosed and treated with Paget's Disease of the breast in the General Surgery Clinic of Başkent University Medical Faculty Hospital between January 2011 and January 2017 were evaluated retrospectively.

**Results:** Of patients who were diagnosed with Paget's disease of the breast and operated in our clinic, 4 (8%) were male and 46 (92%) were female. The mean age was 49 (43-58) in men and 53 (26-90) in women. While all male patients were admitted with the complaints of palpable mass, 14 (30.4%) of women had itching-wounds in the nipple, 6 (13%) had nipple discharge, 19 (41.3%) had palpable mass, 7 (15.2%) had nipple collapse and 5 (10.8%) had pain. Two (4.3%) female patients did not have any complaint at the admission. There was family history in two (50%) male patients and 6 (13%) female patients. Simple mastectomy together with sentinel lymph node sampling were performed in sixteen (32%) patients, modified radical mastectomy in 32 (64%), and segmentary mastectomy and sentinel lymph node sampling were performed in 2 (4%) patients. After the operation; mixed type invasive carcinoma was found in 11 (23.9%) of the female patients, invasive ductal carcinoma in 31 (67.4%) and insitu carcinoma in 3 (6.5%). All male patients had invasive ductal carcinoma. Seventeen (37%) patients had invasive and in situ carcinoma. Three (75%) male and 27 (58.7%) female patients had axillary lymph node metastasis. Postoperatively, 40 (80%) patients received chemotherapy and 32 (64%) patients received radiotherapy. The mean follow-up period was 32 (2-72) months.

**Conclusion:** Paget's disease of the breast is characterized by exematoid changes in the nipple, and almost all of them are associated with underlying invasive or in situ carcinoma. The underlying invasive carcinoma is usually grade 2-3, and in situ carcinoma is almost always associated with high proliferation and increased necrosis. Therefore, mastectomy is appropriate for the surgical treatment of patients and breast-conserving surgery can be used in selected patients.

**Keywords:** Male, mastectomy, breast carcinoma, breast, Paget's Disease

## OP-182 [Breast Diseases and Surgery]

# Perfusion Mapping During the Surgery in Patients in whom Angiography-assisted Nipple-Preserving Mastectomy using Indocyanine Green and Simultaneous Reconstruction with Implant were Performed

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**Objective:** Nowadays, nipple-preserving mastectomy and reconstruction simultaneously with implant (NPM-SR) are being applied in an increasing number of patients with malignant breast diseases and in patients with high genetic and familial risk. In these operations, flap necrosis and loss of prosthesis are seen at high rates due to the difficulty in evaluating flap viability during surgery. Indocyanine green (ICG) is a natural fluorescent dye that has been known for a long time and shows the viability in a most realistic way when an infrared camera is used for angiography. In this study, we aimed to present the angiography method with ICG we used to demonstrate the viability of flap and its results in patients who underwent NPM-SR.

**Material and Methods:** The patients who underwent NPM-SR in our hospital between January 2017 and January 2018 were evaluated with SPY Elite device by using ICG in terms of flap viability. All patients were visualized three times. In the preoperative imaging, the location of the incision, its length and the vascular structures on the flap were identified and mapped. In the imaging performed after NPM, the highest value of the fluorescent radiation determined was 100%. The supply in the other areas was calculated by the device as a percentage of this area and these data were used to evaluate flap viability. According to the perfusion rate, patients were divided into three groups: Poor Perfusion Group (PPG): patients with the lowest perfusion area below 24%; Low Current Group (LCG): patients with the lowest perfusion ranging from 24 to 36%; Normal Perfusion Group (NPG): patients with the lowest perfusion area above 36%. In this imaging, it was decided whether the excision would be performed in areas with low blood supply and how much the prosthesis volume would be. After the permanent implant was placed, the postoperative final state of the patient was imaged and the viability of the flap was confirmed. While excision was made in the appropriate sites in the PPG, no excision was made in the LCG, but vasodilators and microcirculation regulators were added to the postoperative treatment of both groups. These two groups were followed up for at least three days postoperatively. NPG remained in the standard follow-up and was discharged on the first postoperative day. Postoperative evaluations were performed on the postoperative tenth day, in the first and third months.

**Results:** Thirty-six breasts of 26 women with a mean age of 44.34 were evaluated with this method. Bilateral intervention was performed in ten patients. Simultaneous total thyroidectomy was performed in one patient for thyroid papillary cancer. Four patients in PPG did not have any deterioration in flap viability during the postoperative period. Excision was performed in four suitable patients in the PPG and followed up for at least 72 hours in the hospital. Flap necrosis developed in one patient in this group despite excision, and the implant was lost on the 28th postoperative day (2.77%).

**Conclusion:** Imaging with the guidance of ICG is a method which gives the surgeon confidence with an increased accuracy in the estimation of autologous flap necrosis, and which is simple, easily accessible, does not prolong time, and reduces postoperative complication and cost.

**Keywords:** Flap viability, indocyanine green, nipple-preserving mastectomy, reconstruction with prosthesis

## OP-183 [Breast Diseases and Surgery]

# Invasive Lobular Carcinoma Variants of the Breast

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**Objective:** Invasive lobular carcinoma (ILC) of the breast is a special type of breast cancer with different clinical manifestation, morphological and molecular properties and clinical behavior, and its incidence has increased in recent years. Although classic lobular carcinoma is the most common type, some uncertainties remain in other variants. In our study, we aimed to examine the clinicopathological features and survival outcomes of the ILC variants (classical and others).

**Material and Methods:** Seventy-seven ILC patients who were operated in our clinic were determined according to their sub-variants, and their histopathological and survival results were compared.

**Results:** The mean age of the patients was  $54.58 \pm 11.7$  (32-81), and 49 (63.6%) had classic cell histology, 14 (18.2%) had pleomorphic cell histology, 10 (12.8%) had tubulolobular cell histology, 2 (2.7%) had solid cell histology and 2 (2.7%) had signet ring cell histology. Statistically significant differences were found in tumor diameter averages, histological grade, Ki 67 average and ratio, nodal metastasis average and ratio, E-Cadherin, lymphovascular invasion and type of surgery ( $p=0.002$   $p=0.0049$   $p=0.005$   $p=0.049$   $p=0.002$ ;  $0.031$   $p=0.002$   $p=0.027$   $p=0.042$   $p<0.001$ ). The tumor diameter of patients with tubulolobular was significantly lower than those with pleomorphic ones. LAP average of pleomorphic patients was statistically higher than that of classic ones. Pleomorphic and signet ring cell  $>3$  LAP ratio was high. Lumpectomy operation rate of tubulolobular group was high. There was no difference in terms of local recurrence, distant metastasis and overall survival. ILC is the second most common form of breast cancer and usually has a good prognostic phenotype that responds well to endocrine therapy, including low histological grade and low mitotic index, hormone receptor positivity, and HER2, p53 and basal marker negativity. However, variants identified by the new classification of WHO in 2012 were suggested to have different clinical behaviors and corresponding treatment modalities were tried to be established. The histological variants of ILC have been divided into subgroups as classic type, solid, pleomorphic, tubulolobular and mixed type. The most common type is the classic type. It has been observed in previous studies that patients with classic ILC have a better prognosis than other variants. In some studies, a worse prognosis has been reported for the pleomorphic variant, but uncertainty related to other rare variants continues. Although pleomorphic variant was more aggressive than tubulolobular and classic variant in our study, there was no difference in survival results. The limitation of our study was the inadequate number of the rare cases.

**Conclusion:** Despite the good prognostic characteristics of ILC and good response to treatment, the long-term results have been reported to be poor in some studies. Therefore, significant difficulties continue in the management of the patients with this specific disease. Although considered to be a special histological type, the disease is heterogeneous and, therefore, the identification of patients with poor prognostic subtypes will probably be useful in identifying more personalized and aggressive treatment or follow-up for disease progression.

**Keywords:** Invasive lobular cancer, lobular cancer variant, prognosis

## OP-184 [Endocrine Surgery]

# Vitamin D Deficiency is not Associated with Papillary Thyroid Cancer Aggressiveness

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**Objective:** It has been shown that low vitamin D (D vit) level can increase cancer development such as colon, breast, prostate cancer, and vitamin D deficiency is associated with increased cancer stage, recurrence and increased incidence of lymph node metastases in these cancers. Thyroid cancer is the most common endocrine organ cancer and its incidence has been increasing for the last 3 decades. Vitamin D deficiency is common in the world as well as in our country. The relationship between vitamin D and thyroid cancer has been investigated in a small number of studies so far and results contradicting each other have been obtained. In this study, we aimed to evaluate the relationship between PTC aggressiveness properties and vitamin D levels.

**Material and Methods:** Patients who were operated between 2012-2017 and who had PTC in their pathologies were included in the study. Non-PTC cancers, the patients with hyperthyroidism and/or the patients using antithyroid drugs were excluded from the study. In the study; male gender which is one of the characteristics of tumor aggressiveness, age over 55 years, presence of tumor above 1 cm, T3/4 tumor, multicentricity, lymphovascular invasion, presence of lymph node metastasis, central metastasis and lateral metastasis were compared with vitamin D (ng/mL) values. When the patients were categorized into four 25% quarters by vitamin D levels, they were identified as category 1 ( $<7.1$ ), category 2 (7.2-11.8), category 3 (11.9-23.4), and category 4 ( $>23.5$ ).

**Results:** One hundred and thirty-three patients (103 F, 30 M) with a mean age of  $46.4 \pm 13.6$  (17-82) years were included in the study. There was no significant difference in terms of preoperative vitamin D values according to the presence of evaluated char-

acteristics of tumor aggressiveness. When divided into categories by vitamin D values; the rates of female gender in category 1, 2, 3, 4 were 31.1%, 21.4%, 22.3%, 25.2% respectively, and the rates of male gender were 6.9%, 34.5%, 34.5%, 24.1%; the rate of females was significantly higher in category 1 ( $p=0.044$ ). There were no significant differences in terms of patient characteristics according to vitamin D levels and vitamin D categories. In the multinomial logistic regression analysis; when the category 1 was taken as the reference group and the relative predictive risk ratios of the other categories were compared according to category 1, no significant feature was found.

**Conclusion:** According to our results, serum vitamin D levels were not associated with aggressive tumor characteristics in PTC. In order to evaluate this, large studies with larger number of cases are needed.

**Keywords:** Vitamin D, papillary thyroid cancer, tumor

## OP-185 [Endocrine Surgery]

# The Use of Needle Electrode for Intraoperative Neuromonitorization in Thyroid Surgery: A Case Control Study

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**Objective:** In thyroid surgery; the most commonly used method in intraoperative neuromonitorisation (IONM) for finding the recurrent laryngeal nerve (RLN) anatomically, its preservation, and determining its functionality is the observation of the electrical stimulation as an EMG wave with the help of an electrode placed in the endotracheal tube. The needle electrode method applied on both sides of the thyroid cartilage lamina is an alternative receiving electrode system, which provides RLN monitoring via the thyroarytenoid muscle. In this study, we aimed to compare the needle electrode usage and endotracheal tube electrode usage in IONM application in terms of efficacy.

**Material and Methods:** We retrospectively reviewed the data of randomly selected 50 patients who underwent first operation due to thyroid pathology and in whom intermittent IONM was applied through endotracheal tube between January 2012 and January 2018 and the data of consecutive 50 patients in whom intermittent IONM was applied through needle electrode. Demographic data, surgical diagnoses, type of surgery, preoperative amplitude values of nervus vagus (V1) and RLN (R1), post-resection nervus vagus (V2) and RLN (R2) amplitude values were compared statistically. The cost of the two systems per patient were calculated.

**Results:** A total of 200 RLNs under risk were examined. There were 36 women (72%) and 14 men (28%) in both groups. The mean age was  $50.3 \pm 13$  years. Eighty-nine patients underwent total thyroidectomy (TT), 8 patients underwent TT+central lymph node dissection (SLND), and 3 patients underwent TT+SLND+lateral lymph node dissection. When the initial amplitude values were examined, it was found that V1 ( $1157 \pm 472 \mu V$  vs  $543 \pm 302 \mu V$ ) and R1 ( $1175 \pm 872 \mu V$  vs  $716 \pm 374 \mu V$ ) were higher in the needle electrode group ( $p < 0.05$ ). In addition, the amplitude values after the resection in the needle electrode group were higher in terms of the values of both V2 ( $987 \pm 970 \mu V$  vs  $570 \pm 354 \mu V$ ) and R2 ( $1340 \pm 1055 \mu V$  vs  $669 \pm 379 \mu V$ ) ( $p < 0.05$ ). No complication was observed in both electrode applications. Since the difference between the two systems was the electrode system, a 50-fold cost difference was calculated per patient.

**Conclusion:** IONM system in which the receiving electrode is placed in the endotracheal tube has disadvantages such as not placing the tube in the correct place during intubation, failure of the electrodes to achieve sufficient contact because of not using appropriate diameter tube, displacement of the tube because of the manipulation of the trachea or by moving the neck during surgery, and secretion accumulations in the mouth, which affects the recipient system. Many of them which are the causes of low initial signals or false signal loss are the situations outside the control area of the surgeon. With this study, we argue that the use of needle electrode usage which does not include the above mentioned disadvantages is a highly effective and safe IONM method and it is also more advantageous in terms of cost.

**Keywords:** Thyroidectomy, intraoperative neromonitorization, needle electrode

## OP-186 [Endocrine Surgery]

# Are Vitamin D Deficiency and TSH Elevation Risk Factors in Papillary Thyroid Cancer

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**Objective:** In observational studies, a relationship has been found between the risk of papillary thyroid cancer (PTC) and high TSH concentration. In a limited number of studies, PTC and 25-OH Vitamin D3 (D vit) levels were evaluated, and although some studies have reported that there may be a relationship between vitamin D deficiency and PTC, contradictory results have been obtained. In this study, we aimed to evaluate the relationship between PTC and TSH elevation and vitamin D deficiency.

**Material and Methods:** The patients who were operated between 2012 and 2017, whose pathologies were found to be papillary thyroid cancer or benign thyroid disease and whose preoperative vitamin D tests were reached were included in the study. The patients with cancer other than papillary thyroid cancer, the patients with hyperthyroidism, the patients using antithyroid drugs, the patients with hyperparathyroidism at the same time, and the patients receiving vitamin D treatment were excluded from the study. The patients were divided into two groups as papillary thyroid cancer (Group 1) and benign pathologies (Group 2). When the patients were categorized into four 25% quadrants according to TSH (mUI/mL) level, TSH levels were specified as category 1 ( $\leq 0.71$ ), category 2 (0.72-1.53), category 3 (1.54-2.49), and category 4 ( $\geq 2.5$ ). Vitamin D insufficiency was defined as 21-29 ng/mL and vitamin D deficiency was defined as  $\leq 20$  ng/mL. When the patients were divided into four 25% sections according to preoperative vitamin D values, they were identified as category 1 ( $\leq 6.42$ ), category 2 (6.43-10.38), category 3 (10.39-22.29), and category 4 ( $\geq 22.39$ ).

**Results:** Of the 222 patients with a mean age of 47.4+13.2 (17-83), 119 (F: 92, M: 27) were in Group 1 and 103 (F: 85, M: 45) were in Group 2. There were no significant differences in terms of age, gender, preoperative anti-Tg and anti-TPO positivity and the presence of lymphocytic thyroiditis in the pathology. Preoperative TSH levels (mean+SD (median) mUI/mL) were significantly higher in group 1 (2.04+1.55 (1.68)) than in group 2 (1.82+1.94 (1.13)) ( $p=0.029$ ). The distribution rates of the groups 1 and 2 according to the TSH values were 17.9% and 33% in category 1, 26.5% and 24.3% in category 2, 29.1% and 19.4% in category 3, 26.5% and 23.3% in category 4, respectively; there was no significant difference between the groups. Preoperative vitamin D levels (mean+SD) were significantly higher in group 1 (15.88+10.88) than in group 2 (12.94+10.26) ( $p=0.011$ ). Vitamin D deficiency was 65.5% in group 1 and 72.8% in group 2; no significant difference was found. When categorized according to preoperative vitamin D values; the distribution rates of group 1 and 2 patients were 16.8% and 33% in category 1, 26.9% and 23.3% in category 2, 28.6% and 21.4% in category 3, and 27.7% and 21.4% in category 4; the rate of patients in group 2 category 1 was significantly higher ( $p=0.031$ ).

**Conclusion:** According to our results, vitamin D deficiency is high in both benign thyroid and PTC patients. The mean vitamin D levels are higher in patients with PTC and severe vitamin D deficiency is more common among patients with benign thyroid disease. No positive correlation was found between PTC and TSH elevation and vitamin D deficiency.

**Keywords:** Vitamin D, papillary thyroid cancer, TSH

## OP-187 [Endocrine Surgery]

# Factors Affecting the Success of Preoperative Imaging Methods in Patients with Primary Hyperparathyroidism

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**Objective:** Imaging techniques in patients with primary hyperparathyroidism have become an important factor affecting surgical success, particularly with minimally invasive parathyroidectomy's being more preferred. In this study, the factors affecting the success of parathyroid gland imaging methods were examined.

**Material and Methods:** Clinical, biochemical, radiological (ultrasound (USG) and sestamibi parathyroid scintigraphy) and pathological results of 174 patients who were operated for primary hyperparathyroidism between January 2014 and December 2016 were analyzed retrospectively. For statistical analysis, the Chi-square analysis was used for qualitative data and independent sample t-test was used for quantitative data.

**Results:** In our study, the correct localization rate was found to be 66% for USG and 68.9% for parathyroid scintigraphy, and when both displayed consistency, the correct localization rate was 77.3%. It was observed that the accuracy of preoperative imaging techniques increased as the levels of preoperative parathyroid hormone and preoperative calcium ( $Ca^{++}$ ) and the diameter of the pathological gland increased and the number of pathological glands decreased. A statistically significant difference was found in the accuracy of the preoperative  $Ca^{++}$  level and preoperative USG ( $p=0.02$ ) and in the accuracy of preoperative parathyroid scintigraphy and the diameter of pathological gland ( $p=0.01$ ). The rate of the presence of a single adenoma was significantly higher in the patients with accurate USG localization (88.7%). On the other hand, the rates of the presence of two adenomas (5,1%) and hyperplasia (22%) were higher in the case of wrong localization ( $p=0,02$ ). While the accuracy rate of USG



in the glands with lower localization was higher (76,5% vs. 44,1%), it decreased in upper localization, in the presence of more than one adenoma, and in glands with ectopic and mediastinal localization ( $p=0,08$ ). Persistent HPT was present in 4 (3.5%) cases localized by USG and surgical success was achieved in 96.5% of patients. A statistically significant difference was found between persistent HPT and accurate or inaccurate localization of USG ( $p=0.02$ ). The glands localized by parathyroid scintigraphy more accurately were found to be located in the lower neck (71.7% vs. 53.7%) ( $p=0.04$ ). In the presence of multiple adenomas with upper localization and ectopic glands, the accuracy rate was decreased. The parathyroid scintigraphy was able to detect 3 glands located in the mediastinal area. The surgical success was found to be 95% in cases that were accurately localized by parathyroid scintigraphy ( $p=0.12$ ). When USG and parathyroid scintigraphy together indicated correct localization, the surgical success was found to be 97.6%.

**Conclusion:** In patients with primary hyperparathyroidism, the diameter, histopathology and localization of the pathologic glands affect the accuracy of preoperative imaging techniques. The possibility of the presence of more than one adenoma in surgical exploration increases in cases that cannot be detected by preoperative imaging methods.

**Keywords:** Primary hyperparathyroidism, parathyroidectomy, imaging

## OP-188 [Endocrine Surgery]

# Comparison of Thyroid Surgery in Young and Elderly Patients

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Thyroid cancer is the most common malignancy of the endocrine system. The aim of this study was to compare the results of patients in two groups (under the age of 65 years and over the age of 65 years), who were operated for thyroid cancer. A retrospective analysis of 1176 patients who underwent thyroid cancer surgery between January 2007 and December 2016 was performed. The patients were divided into two groups as those at the age of  $\geq 65$  years (geriatric group) and those at the age of  $< 65$  years (non-geriatric group). The patients were discharged 4 days later at the latest. They were evaluated in the outpatient clinic after 10 and 30 days and then, at least every 6 months in the first year. All data about surgery, pathological classification and postoperative complications were collected. Totally 139 (11.8%) patients were older than 65 years and 1037 patients (88.2%) were younger than 65 years. There were 104 female (74.8%) and 35 (25.2%) male patients in the geriatric group. In the non-geriatric group, 917 (78%) patients were female and 259 (22%) were male. No significant difference was observed between the groups in terms of gender distribution ( $p=0.39$ ). The mean age was  $68.73 \pm 5.23$  years and  $47.21 \pm 10.10$  years in the geriatric and non-geriatric groups ( $p < 0.001$ ), respectively. There was no significant difference between the groups in terms of surgery and postoperative major complications. FNAB showed a significant increase in malignant potential in the elderly patients ( $p=0.005$ ). In our series, malignant differences between geriatric and non-geriatric groups were less prominent among thyroid carcinomas other than capsular invasion. Although there was no significant difference in histopathological examination, malignant cytology was detected to be higher in the elderly patients. No significant difference was found between the young and elderly patients in terms of complications. In this study, papillary thyroid Ca (PTC) was found to be the most common type of cancer and we could not find any difference in the distribution of cancer types in geriatric and non-geriatric patients. In the elderly patients, thyroid nodules should be evaluated carefully and treatment methods should be recommended without delay. Total/near total thyroidectomy is safe in experienced hands for elderly patients. There seems to be no difference with regard to complications.

**Keywords:** Advanced age, thyroidectomy, thyroid surgery, thyroid cancer

## OP-189 [Colon and Rectum Surgery]

# The Experience of Treatment Center Affects Mortality in Fournier Gangrene

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**Objective:** Fournier's gangrene (FG) is a necrotizing soft tissue infection that involves perineal, perianal or genital areas, requires urgent debridement, and may be associated with a high risk of mortality even if properly managed. In this study, we aimed to investigate the effect of the experience of treatment center on FG mortality.

**Material and Methods:** Patients who were treated for the diagnosis of FG in the department of general surgery in our center between 1996 and 2017 were included in the study. While 120 (66.7%) cases between 1996 and 2012 constituted the group of past patients, 60 patients (33.3%) treated between 2012 and 2017 constituted the group of new patients. Demographic data, UFGSI scores, operative and postoperative results of the patients were examined. The groups of past and new patients were compared in terms of mortality rates.

**Results:** 180 patients (68.9% male) with a median age of 58 (22-88) years were included in the study. Of them, 53.3% had diabetes mellitus (DM). In the FG etiology, the most common pathologies were originated from the anorectal region (57.2%). The mean number of debridements was  $3.3 \pm 2.3$ , and the opening of stoma was required in 38 patients (21.2%). In 64 patients (35.7%), the wound was closed with STSG or flap. The overall mortality rate was 21.1%. When the past and the new patients were compared, the group of new patients were older (60.7 and 56.6,  $p=0.04$ ) and had higher UFGSI scores (12.5 and 9.6,  $p=0.0064$ ), but the mortality rates were similar between the two groups (20.8% and 21.6%,  $p=0.89$ ).

**Conclusion:** FG is still associated with high mortality. However, in our last 5-year series, the fact that we have a similar mortality rate as in our previous series while treating a higher-risk patient group may be related to the accumulation of our experience in this fatal disease.

**Keywords:** Fournier, gangrene, mortality

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## OP-190 [Colon and Rectum Surgery]

# New Diagnostic Markers in Patients Diagnosed with Polyposis Coli without APC Mutation

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**Objective:** Familial adenomatous polyposis (FAP) is a syndrome with autosomal dominant inheritance, which is characterized by the formation of 100 and more polyps in the colon and rectum and occurs due to the mutations in the adenomatous polyposis coli (APC) gene. The aim of this study was to identify new diagnostic markers in families clinically defined as FAP, but having no pathogenic APC mutation.

**Material and Methods:** In our study, 44 families with at least one case diagnosed with polyposis coli between 1997 and 2017 and 18 individuals in these families but not diagnosed yet were evaluated. Pedigrees of families were drawn. RNA isolation was made from blood materials of individuals and the expression level of 18 different genes were examined. The variations were evaluated by using a web-based database of Sabioscience.

**Results:** In our study, pathogenic APC mutation was detected in 9 probands of 44 families and these families were genetically diagnosed with FAP. The archived blood samples of 11 of the 35 families could not be reached. When the expression of 18 different genes in 24 families was examined, Axin, p53, PTEN, MLH1 gene losses and beta-catenin, RAS increases were determined and Beta-catenin increase and p53 loss were found to be significant. In the study, the blood materials of 12 people with no familial history of cancer was determined as the control group. The decrease in p53 expression in 8 families was also determined in individuals without symptoms.

**Conclusion:** In routine practice, resection is planned for polyps detected as a result of the control colonoscopy performed in the individuals having APC mutation but not symptoms. However, there is no diagnostic marker in families with negative. Our study supports that the investigation of the gene expressions is very important for the determination of genetic susceptibility to colorectal cancer and for the prediction of tumor formation by defining FAP syndrome.

**Keywords:** Polyposis coli, FAP, APC, mRNA, diagnosis

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## OP-191 [Colon and Rectum Surgery]

# Treatment Results of Postoperative Recurrent Pilonidal Sinus with Crystallized Phenol

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**Objective:** Recurrent pilonidal sinus (rPS) after surgery is troublesome for both the surgeons and the patients. In this type of patients, loss of labor, pain and discomfort are high because of the selection of complex surgical strategy. Crystallized phenol therapy (CPT) is a simple and inexpensive non-operative treatment method that is widely used for pilonidal sinus (PS). In this study, we aimed to present our 20-year results by applying CPT, which is successfully applied in the treatment of primary PS, in rPS.

**Material and Methods:** Of 227 patients who developed rPS after pilonidal sinus operation and underwent CPT between March 1995 and January 2015, those who did not complete the treatment and were followed up for less than 12 months were excluded and the data of 190 patients were examined in the study. The CPT was applied in the conditions of outpatient clinic by using the method of Dođru et al. Patients' data on age, gender, BMI, the type and number of previous surgeries, the time from the recurrence of the disease until admission, bad habits, number of phenol applications, duration of follow-up and number of recurrences were recorded prospectively and evaluated retrospectively. The factors affecting the success of phenol treatment and recurrence were investigated.

**Results:** No serious complications occurred during the treatment period. Most of the patients (94%) were performed sinus excision and primary closure. The mean age was  $26.3 \pm 8.0$  (15-50) years. The mean follow-up period was  $45.8 \pm 32.2$  (12-251) months. The mean number of applications per patient was  $2.6 \pm 2.4$  (0-14). The time from recurrence to admission was  $22,2 \pm 34,3$  (0-240) months. While no recurrence was observed in 114 (60%) of the patients, 66 patients had recurrence after CPT. Twenty-two patients receiving re-treatment recovered without any problems. Cure after recurrence was provided for 3 times in 2 patients and 4 times in 1 patient. Ten patients refused treatment and they were operated. 44 patients did not accept treatment after recurrence. As a result of 20-year follow-up, our total success rate is 71.5%. It was observed that factors such as age, gender and BMI did not affect recurrence after CPT ( $p > 0.05$ ). There was a correlation between the time from the occurrence of rPS until admission and recurrence after CPT ( $p = 0.02$ ). In addition, patients who had a history of smoking and alcohol consumption had higher rate of recurrence after CPT ( $p = 0.04$ ). There was no relationship between the type of previous operation and recurrence after CPT ( $p > 0.05$ ).

**Conclusion:** The best treatment option for pilonidal sinus is still controversial. Recurrence rates after surgical treatments are between 3% and 46%. In rPS after surgery, surgery-induced complications are more common because of the need for more definitive surgery. Bali et al. recommend limberg flap procedure for rPS treatment because it has less surgical complications than the other procedures. Aygen et al. applied CPT in the treatment of rPS and they achieved a success rate of 91.7% in a 4.5-year follow-up. In our study, which is the continuation of that study, we achieved a success rate of 71.5% in a wider series in a 20-year follow-up. We provided cure in all patients who continued treatment after recurrence. In conclusion, CPT can be safely used as the first treatment option in patients with postoperative rPS.

**Keywords:** Recurrent pilonidal sinus, crystallized phenol, non-operative treatment

## OP-192 [Emergency Surgery and Trauma]

# Our Clinical Experience in the Follow-up and Treatment of Appendiceal Tumors

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**Objective:** Primary tumors of the appendix are rare and they are usually diagnosed after surgeries performed for acute appendicitis, primary ovarian cancer or other indications. They constitute 1.1% of all appendectomy specimens. The aim of our study was to review our experience in the primary tumors of the appendix, to compare our management strategy with other common management strategies described in the current literature and to better define the management algorithm accepted for primary appendix tumors.

**Material and Methods:** The data of 2650 patients who were hospitalized with the diagnosis of acute appendicitis and who underwent appendectomy in İstanbul Medical Faculty between January 1, 2008 and February 30, 2018 were retrospectively analyzed. The data of 52 (1.9%) patients with low grade dysplasia, serrated adenoma, low grade mucinous neoplasia, neuroendocrine tumor, mucinous adenocarcinoma and adenocarcinoma ex-goblet cell carcinoid were evaluated in detail. Patients with the origin of other organs (ovary, colon, etc.) and appendix metastasis were excluded from the study. Patients's ages, sexes, time between the onset of symptoms and admission, diagnostic method, epidemiological data, intraoperative findings, length of

hospitalization, examinations after discharge, re-operations, use of postoperative chemotherapy and mortality-morbidity were evaluated.

**Results:** Of the 52 (M/F:23 (44.2%)/29 (55.8%)) cases with appendix neoplasia, 15 were benign (Group A 28.8%), 35 were border-line (Group B 67.3%), and 2 were malignant (Group C 3.8%). The mean age was 64.4±17.4 years for Group A, 47.5±18.8 years for Group B, and 52.5±4.2 years for Group C. The mean follow-up periods of the groups were 36.4±33.1, 54.4±31.5 and 30.5±41.7, respectively. In Group A, 2 patients had low-grade dysplasia and 13 patients had serrated adenoma. In Group B, 20 patients had low grade mucinous neoplasia (LAMN) and 14 patients had neuroendocrine tumor. Right hemicolectomy was performed for positive surgical margins in 2 patients with LAMN and for positive lymph node in 2 patients with neuroendocrine tumors. Right hemicolectomy+peritonectomy+HIPEC was performed in 2 patients with mucinous adenocarcinoma and LAMN (musin accumulation in the abdomen). Appendectomy was sufficient in 45 patients. The examinations of the patient diagnosed with ex-goblet cell carcinoid is going on. There was no recurrence in the follow-ups of the patients.

**Conclusion:** The primary cancers of the appendix are histologically various and therefore, historically different classifications have been made. Appendectomy may be sufficient for all subtypes of early stage tumors. Oncological surgery and chemotherapy such as HIPEC that are appropriate for advanced stage tumors should be performed when necessary. Considering the rarity of primary appendix cancer and the lack of established guidelines for administration, it should be treated with a multidisciplinary approach in specialized centers.

**Keywords:** Acute appendicitis, appendix tumors, appendectomy

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## OP-193 [Colon and Rectum Surgery]

# Robotic Complete Mesocolic Excision in the Surgical Treatment of Transverse Colon Tumor

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**Objective:** In the surgical treatment of transverse colon tumor, performing complete mesocolic excision (CME) with laparoscopic approach involves some technical difficulties. Thanks to the advantages of robotic surgery, such as the use of three-dimensional images and angled instruments, these difficulties encountered in laparoscopy can be avoided. In the literature, there is no data on robotic CME operation in transverse colon tumor. In this study, it was aimed to present the technical details of the robotic CME operation in the transverse colon tumor and to evaluate its short-term outcomes.

**Material and Methods:** A total of 29 patients who underwent robotic CME surgery with da Vinci XiTM system for transverse colon adenocarcinoma in our clinic between December 2014 and December 2017 were included in the study. Transverse colon tumor was defined as a tumor located between the hepatic and splenic flexure. Data were retrieved from a prospectively recorded database of colorectal cancer. Patients' clinical data, intraoperative findings, histopathological data, and the postoperative first 30-day results were analyzed retrospectively.

**Results:** Of the patients, 21 (72%) were male and 8 were female, the mean age was 62.9±15.6 years, and the mean body mass index was 26.4±4.8 kg/m<sup>2</sup>. In 12 of 29 patients, extended right colectomy was performed. Extended left colectomy was performed in 10 patients, subtotal colectomy in 6 patients, and total colectomy in 1 patient. The mean length of surgery was 321.7±111.3 min and the mean amount of bleeding was 106.9±110.9 ml. No patient underwent laparoscopy or open surgery. A total of 2 patients (7%) had injury on the right colic vein branch and it was intraoperatively repaired without any problem. The mean time passing for the first defecation and oral solid food intake was 3.5±1.3 and 3.9±1.7 days, respectively, and the mean duration of hospital stay was 7.1±3.0 days. Postoperative complications developed in a total of 7 (24%) patients (paralytic ileus=2, wound site infection=2, pulmonary embolism=1, pneumonia=1, and atelectasis=1). In the histopathological examination, all resections were R0 and the mean number of excised lymph nodes was 44.9±23.4 (range, 17-111).

**Conclusion:** Compared with standard colectomy, it has been demonstrated that CME technique performed with high vascular ligation and embryological plane has better oncological results in terms of local recurrence and survival and this finding has increased the level of attention paid to CME in recent years. CME was firstly performed with open surgical technique, but laparoscopic method was also preferred over the years due to its advantages in the postoperative period. However, transverse colon tumors were ruled out in most of the laparoscopic series because of the less frequent localizations in the colon than other localizations and the technical difficulties in the dissection of the middle colic vessels. Together with the developing technology, the introduction of robotic systems in the field of colorectal surgery has provided important advantages such as stable camera and tissue traction for the surgeon, three-dimensional high-resolution stereoscopic images, wide mobility with angled instruments, and better ergonomics.

The results of our study show that transverse colon CME surgery can be performed with good oncological dissection and acceptable morbidity thanks to the technical advantages offered by robotic surgery.

**Keywords:** Transverse colon cancer, complete mesocolic excision, robotic surgery

## OP-194 [Colon and Rectum Surgery]

# Transanal Endoscopic Surgery in Rectum Tumors: Single Center Experience

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**Objective:** Transanal endoscopic surgery is a preferable technique in the treatment of benign and selected malignant rectal lesions with similar survival rates, but with lower morbidity compared to the conventional surgery.

**Material and Methods:** Twenty-four patients who underwent transanal endoscopic surgery at Ege University Hospital were included in the study. Data of the patient were obtained retrospectively. The indications were benign rectal lesions and early malignant lesions. The operations were performed by using the transanal endoscopic operation platform (TEO®; Karl Storz, Tuttlingen, Germany).

**Results:** Of 24 patients, 79% (n=19) were male and 21% (n=5) were female. The mean age was 61 (17-87, SD=15) years. The mean distance of the tumor from the anal entry was 7 cm (3-15, SD=2). The mean tumor diameter was 3 cm (0.5,7, SD=1). Of the lesions, 88% (n: 18) were fully excised in a single piece and 8% (n=2) were excised as fragments. Complete resection could not be achieved in one (4%) lesion. The indication was benign lesion (adenoma) in 18 (75%) patients and adenocarcinoma in the other 6 (25%) patients. Malignant lesion was detected in 75% (n: 18; Tis: 9, T1: 0, T2: 7, T3: 2) of the cases in the pathological evaluation after resection. Malignancy was detected in 12 of 18 patients who were thought to be benign before the operation. In the postoperative period, 3 patients (12%) developed morbidity (perforation in one patient, bleeding in two patients). The lateral and deep surgical margins were tumor-free in all malignant patients. Two (8%) patients with carcinoma in situ were observed to have adenomatous epithelium in the surgical site. The mean length of hospital stay was 3 days (SD=3). The mean follow-up period was 24 months (SD=12). Recurrence adenoma developed in 1 (4%) patient who was operated for adenoma during the follow-up period. Local excision was performed again. Total mesorectal excision was performed in 1 of 7 patients detected to have T2 invasion in the histopathology and others were followed up. No local recurrence or distant metastasis was detected in these patients. Total mesorectal excision was recommended after radiochemotherapy in two patients with T3 invasion in the histopathological evaluation. One patient did not accept the operation and lung metastasis was detected in this patient in the 31st month of the follow-up.

**Conclusion:** Transanal endoscopic surgery allows the excision of rectal lesions that cannot be excised by a traditional approach (endoscopic or local excision) with a low morbidity rate. Moreover, it provides the establishment of definite histopathological diagnosis with the total excision of lesions the pathology of which cannot be revealed exactly. It can safely be used for the excision of early stage malignant rectum tumors with appropriate surgical margin.

**Keywords:** Rectal polyp, rectum cancer, transanal endoscopic surgery

## OP-195 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Case Series on Endoscopic Mucosal Resection and Endoscopic Submucosal Dissection and Results

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**Objective:** Today, endoscopy is a part of surgical practice, both as a diagnosis and treatment method. Many surgical pathologies can be treated with endoscopic submucosal resection (EMR) and endoscopic submucosal dissection (ESD). In this presentation, endoscopic treatments of mucosal and submucosal lesions of the gastrointestinal system (GIS) in our clinical practice were presented.

**Material and Methods:** The results of EMR and ESD performed in our hospital between 2014 and 2018 were discussed. The mean age of 49 patients (22F/27M) was 57.4 years.

**Results:** In our study, ESD and EMR procedures were applied to 5 different anatomic groups in GIS. EMR-ESD ratios and locations for our case series are presented. These cases included 9 (4F/5M) patients with lesion in the esophagus, 26 (14F/12M) patients with lesion in the stomach, one male patient with lesion in the duodenum, 8 patients with lesion in the rectum (2F/6M), and 5 patients with lesion in the colon (2F/3M). Of these patients, 5 with stomach lesions were performed ESD procedure by double endoscopes.

Endoscopic ultrasonography (EUS) was applied in 6 patients according to the shape and size of lesion before the EMR procedure and in all patients before ESD.

The histopathological diagnoses of our cases.

In one patient who underwent ESD using double endoscope, insitu carcinoma was detected. The patient was followed up because a safe surgical margin was provided.

In one of patients, the duodenum was treated with EMR twice at different areas and at different times. Both pathologies were reported as adenomatous polyps.

In one of our EMR cases with colon localization, in situ carcinoma excised with intact borders was detected.

In one of the cases who underwent ESD in the rectum, insitu carcinoma was found. Another one had T1 invasive carcinoma. The patients were followed-up because of safe surgical margins in both lesions.

No complication was seen in patients undergoing EMR.

In the patients performed ESD, bleeding could not be controlled with cautery in one patient and the control was then provided by applying clips. In addition, repair of perforation was performed with endoscopic clips in 2 patients.

**Conclusion:** EMR and ESD are advanced endoscopic procedures and they require serious experience in endoscopy. The facts that our unit has adequate equipment, double endoscopes can be used at the same time, and EUS can be performed at any time allows EMR and ESD procedures to be performed more safely. The short recovery time in EMR and ESD procedures, the possibility of treatment in early stage tumors and benign lesions, and the absence of surgical trauma are the general advantages. The need for EUS before the procedure and the need for advanced skills for endoscopy are its disadvantages.

**Keywords:** Endoscopic submucosal dissection, endoscopic submucosal dissection, GIS mucosal and submucosal lesions

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## OP-196 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Our Experience of Stent in Upper Gastrointestinal System Diseases

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**Objective:** Malignant and benign diseases may cause perforation, fistula or obstruction in the proximal part of the gastrointestinal system. Any of these complications prevent the intake of adequate calorie for patients' daily needs. In this case, weight loss, electrolyte imbalance due to nausea and vomiting, and impairment in general condition occur in patients. Upper GIS stent is frequently used in cases of extragastrointestinal tumors causing obstruction by directly invading the gastrointestinal system or making external compression, as well as in cases of esophageal, gastric and periampullary tumors. With SEMS (Self Expandable Metallic Stent), it is possible to provide the continuity of oral intake by providing passage in the upper GIS and to improve the quality of life. On the other hand, they are also used for benign conditions such as anastomotic leakage, gastrointestinal fistula and strictures. In this group of patients, SEMS is an effective and reliable alternative treatment method compared to other endoscopic, palliative surgery and oncological interventions such as feeding gastrostomy, jejunostomy, or by-pass surgery, and balloon or rigid dilation requiring re-intervention, Argon Plasma Coagulation (APC), Chemoradiotherapy, Ethanol injection, Brachytherapy, Endoluminal laser ablation, and Photodynamictherapy (PDT).

**Material and Methods:** The data of all patients who underwent upper gastrointestinal stenting for benign and malignant reasons in the Endoscopy Unit of Health Sciences University between January 2013 and January 2018 were evaluated retrospectively. Demographic characteristics and stent indications of the patients were recorded. The patients were asked to score their dysphagia levels before and after stenting and they were recorded. The relationship between technical success and clinical success and early and late complications associated with stenting were evaluated.

**Results:** Between January 2013 and January 2018, 207 endoscopic procedures were performed on 142 patients. According to the order of frequency, the diseases of the patients were esophagus tm in 54 patients (38.02%), esophageal-gastric junction tumor in 19 (13.3%) patients, interventions due to laryngeal tumors in 14 (9.8%) patients, and complications associated with lung tumor in 13 (9.1%) patients. 101 of the patients were male and 41 were female. The mean age of the patients was 63.5 years. Technically successful stent placement was achieved in 138 (97.1%) of 142 SEMS (Self Expandable Metallic Stent). A total of 109

dilatations were performed dilatation procedure. Different complications developed in 19 patients. In terms of clinical success, while 142 patients could not applied oral feeding before stenting, oral intake was achieved in 139 (97.8%) patients after successful stent placement. Stent patency was achieved in all patients (98.7%) in the 1st month. The stent patency rate was 87.4% in the 3rd month and 18 patients had to be intervened due to stent migration or overgrowth.

**Conclusion:** Use of SEMS for palliative and curative purposes in eliminating malignant and benign upper GIS obstructions. It has less pain, lower mortality and lower morbidity than surgical methods. Besides, it is an effective and reliable treatment method by decreasing the length of hospital stay, offering advantages such as low cost, and consequently providing high clinical success.

**Keywords:** SEMS, upper GIS tm, stenosis and fistula

## OP-197 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Is Cholecystectomy Necessary After Endoscopic Retrograde Cholangiopancreatography (ERCP)?

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**Objective:** ERCP is usually performed in patients with choledocholithiasis, and cholecystectomy is performed in the following period. There are many studies in the literature about the timing of cholecystectomy after ERCP. However, in the literature, there are few studies showing that patients can be followed up without cholecystectomy in the process following ERCP. In this study, we investigated whether the patients who underwent ERCP due to choledochal stone had any complaints and whether any stone remained in the gallbladder during the follow-up without cholecystectomy.

**Material and Methods:** All patients who underwent endoscopic retrograde cholangiopancreatography in our endoscopy unit between January 2011 and October 2015 were reviewed retrospectively in hospital database and patient files. The patients who underwent ERCP due to choledochal stone and in whom cholecystectomy was and was not performed in the following period were included in the study. The patients who were cholecystectomized before ERCP were excluded from the study. The patients who met the study criteria were called for control, and their magnetic resonance cholangiopancreatography (MRCP) and ultrasonography (USG) controls were performed. Demographic information, comorbidities, complications, follow-up periods, symptoms, presence of gallstones before and after ERCP, cystic duct and choledochal duct diameters were analyzed.

**Results:** ERCP procedure was performed for choledocholithiasis in a total of 699 patients between January 2011 and October 2015. It was determined that 503 patients had not been cholecystectomized at the time of the procedure and 309 of these patients were reached during the study period. Of the 309 patients that constituted the study group, 182 (59%) were female and 127 (41%) were male; the median age was 57 (18-95). It was found during the follow-up period after ERCP that 159 (51%) of 309 patients underwent cholecystectomy and 150 (49%) patients were still not operated. It was observed that 309 patients who had cholecystectomy remained asymptomatic until the day of operation and 69% (n=214) of those who did not undergo cholecystectomy remained asymptomatic during the 26 (1-86) month median follow-up period. It was determined that 132 (88%) of 150 patients who did not undergo cholecystectomy and was still followed up remained asymptomatic during the follow-up period of 47 months (11-86). Of the 150 patients who did not undergo cholecystectomy, 62 patients who were able to come to the hospital underwent control MRCP and USG, and they were evaluated in terms of stone in the gallbladder. While 41 (66%) of 62 patients had gallbladder stones prior to ERCP, it was found in control USG and MRCP imagings that stone remained in 19 (31%) patients (p=0.008). It was observed that 22 (54%) of 41 patients who had stones in the gallbladder before the procedure had no remaining stones in the gallbladder during the follow-up period after ERCP.

**Conclusion:** In this study, it was found that most of the patients who underwent ERCP due to choledochal stone and who did not undergo cholecystectomy during the follow-up period were asymptomatic. In addition, the majority of patients with gallbladder stones before ERCP were found to have no stones in the gallbladder during long-term follow-up after ERCP. Based on these results, routine cholecystectomy may not be performed after ERCP.

**Keywords:** Endoscopic sphincterotomy, choledocholithiasis, cholecystectomy

## OP-198 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# The Importance and Features of “Inlet Patch” Detected during Esophagogastrosocopy

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**Objective:** Inlet patch (IP) or heterotropic gastric mucosa is the name given to the red/salmon colored mucosal islet observed in the proximal esophagus. It is seen at a frequency of 0.1-10% on average in the endoscopic examinations. Most IPs are asymptomatic and are incidentally detected. The rate of admissions to the clinic with laryngopharyngeal reflux symptoms is 70%. The association of IP with dysplastic changes and malignancy is very rare, but there are cases in the literature. In this study, we aimed to evaluate the association of the incidence of an inlet patch detected during the upper gastrointestinal endoscopy and the incidence of endoscopic findings with hiatal hernia/insufficiency.

**Material and Methods:** Between January 2014 and December 2017, 6687 patients in whom upper gastrointestinal endoscopy was performed were evaluated retrospectively. The presence of red/salmon colored mucosal patch in the upper esophagus was accepted as IP. Histopathologically and through endoscopic biopsy; age, gender, the presence of dyspepsia and/or reflux symptoms, IP localization, esophagitis association, IP diameter and the presence of hiatal hernia/insufficiency were evaluated retrospectively.

**Results:** Of the 6687 patients, 544 (8.11%) had hiatal hernia and 32 (0.48%) had IP. Of the patients with IP, 16 (50%) were male and 16 (50%) were female. The mean age was found as 57.25 (36-89). IP was seen in the upper esophagus in 23 patients (71.9%), in the middle esophagus in 6 patients (18.8) and in the lower esophagus in 3 patients (9.4%). The lesion diameter was less than 1 cm in 14 patients (43.8%), 1-2 cm in 11 patients (34.4%), and more than 2 cm in 4 patients (12.5%) (The report for the lesion diameter of 3 patients (9.4%) was missing). Of the patients with IP, 16 (50%) had esophagitis. The number of patients with dyspeptic and reflux symptoms was 21 (65.6%). Hiatal insufficiency/hiatal hernia was detected in 22 patients (68.8%). The rate of inlet patch was found to be statistically significantly high in patients with Hiatal hernia. The incidence of dyspeptic and reflux complaints was found to be statistically significant in patients with a lesion diameter of 1-2 cm.

**Conclusion:** In the literature, the clinical manifestation of IP is attributed to the ability of the ectopic mucosa to produce acid. The fact that dyspeptic and reflux complaints increase as the IP diameter increases in our study supports this. Although the risk of malignancy arising from IP is low in this study, it has been concluded that IP should be investigated during endoscopic evaluation and endoscopic monitoring of these lesions is important especially in patients diagnosed with symptomatic (with dyspeptic and reflux complaints) hiatal hernia.

**Keywords:** Hiatal hernia, inlet patch, heterotropic gastric mucosa

## OP-199 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

### “EMOTIONAL” Results of the Endoscopic Interventions of the Surgeons in Performance System

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**Objective:** In this study, the effect of the endoscopic procedures of the surgeon in the performance system of Ministry of Health on the performance scores of the surgeon, surgical clinic and gastroenterology clinic was investigated.

**Material and Methods:** With the data obtained from the information management system of HSU Ankara Dışkapı Yıldırım Beyazıt TRH; a) Performance scores in 2014 and between the years of 2015-2017 when endoscopic interventions were started in surgery clinic, b) Performance scores of the surgeons working full-time, performing (n=11) and not performing the endoscopic interventions (n=12), c) Performance scores that Gastroenterology Clinic obtained with endoscopic procedures between 2015-2017 were evaluated based on the total endoscopy scores obtained between 2015 and 2017.

**Results:** Surgical performance scores were observed to increase in the years after 2014 when endoscopy was performed *the Spearman Correlation Test* (+1.00). There was a significant difference between the total performance scores of the surgeons who performed and did not perform endoscopy (p=0.002). It was observed that performing endoscopy increased the performance score of the surgeon. There was no difference between the endoscopic performance scores of the Gastroenterology Clinic between the years of 2015 and 2017 (p=0.700). There was no difference in the total performance scores of the Gastroenterology Clinic between 2015 and 2017 (p=0.381).



**Conclusion:** Endoscopy is an indispensable instrument in the management of postoperative complications, in the diagnosis, and in the perioperative evaluation. The endoscopic procedures of the surgeon increase the performance scores of both the individual and clinic, and increase the share that he/she receives from the circulating capital. While the endoscopic performance score increased in the years 2015-2017 when our clinic performed endoscopy, the performance scores of Gastroenterology Clinic were observed not to change significantly. This may be explained by the fact that the surgical endoscopy unit receives patients from their own outpatient clinics. When the number of advanced endoscopic interventions (ERCP, Endosonography etc.) and the number of interventions referred from other clinics increase, it is obvious that the share of surgical clinics will increase. That's why gastroenterology considers this issue as "EMOTIONAL". Surgeons should not ignore the "EMOTIONAL" aspect of this issue and should perform endoscopic interventions.

**Keywords:** Surgery, endoscopy, circulating capital, performance

## OP-200 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# A 15-month Experience After Endoscopic Retrograde Cholangiopancreatography Training

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**Objective:** Endoscopic retrograde cholangiopancreatography (ERCP), which has recently been used for the treatment of hepatopancreatobiliary system diseases rather than diagnosis, is a special method in the endoscopy discipline. We aimed to present the initial experience of the 15-month period following ERCP training.

**Material and Methods:** The procedures performed between December 2016 and February 2018 were examined retrospectively by the general surgeon who had ERCP training in our hospital.

**Results:** Between December 2016 and February 2018, 116 ERCP procedures were applied by the same person in 111 patients, 47 of whom were male and 64 were female, and whose mean age was 62.7 (16-93). Of the procedures, 18 were performed under sedation and 98 of them were performed under general anesthesia. While sphincterotomy was performed in 58 cases, a preincision was made in 15 cases. Stone was extracted from the choledoch in 52 cases, and stent was applied in 18 cases. In 5 cases, injection therapy was applied for bleeding. Wirsung cannulation was performed in 28 cases. Thirty-one interventions failed, and ERCP procedure could not be performed because the advancement failed due to pyloric stenosis and because of the deterioration of the general condition of the patient. Choledoch could not be cannulated due to bleeding or edema during 21 procedures. Pancreatitis developed in 11 cases after ERCP; one patient underwent laparotomy for necrotizing pancreatitis and necrosectomy was performed. The average length of hospital stay after ERCP was 4 (1-31) days.

**Conclusion:** Because ERCP is a minimally invasive procedure; in addition to its life saving characteristics, it may cause serious complications, well as. The indications should be evaluated and the patient follow-up after the procedure should be performed carefully. Especially the compliance of ERCP team is important in terms of the development of complications.

**Keywords:** ERCP, training, hepatopancreatobiliary

## OP-201 [Colon and Rectum Surgery]

# Total Robotic Restorative Total Proctocolectomy and Ileal Pouch Anal Anastomosis in Ulcerative Colitis Patients: First Experience

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**Objective:** Total robotic restorative total proctocolectomy and ileal pouch anal anastomosis (TRRP/IPAA) is a new application in the surgical treatment of the patients with ulcerative colitis (UC). This technique requires advanced experience and operation skills in pelvic and multi-quadrant minimally invasive surgery. In our study, we aimed to present our first institutional experience in TRRP/IPAA patients.

**Material and Methods:** The patients in whom TRRP/IPAA was performed between January 2015 and November 2017 were included in our study. Da-Vinci Xi® was used in all operations. Patient age, gender, body mass index (BMI), ASA score, operation indication, urgency of the operation, docking number, duration of operation, estimated operative blood loss, postoperative short term ( $\leq 30$  days) and long term ( $> 30$  days) complications were evaluated.

**Results:** A total of 10 patients were included. The median patient age was 27 (range, 14-48 years), the median BMI was 21 kg/m<sup>2</sup> (range, 15-25 kg/m<sup>2</sup>), and the median ASA score was 2 (range, 1-3). UC resistant to medical treatment (n=6), cancer/dysplasia (n=2), growth retardation due to medical treatment (n=1), and were bleeding resistant to medical treatment (n=1) were the indications for surgery. The median docking number was 3 (range, 2-3). The median duration of operation was 380 minutes (range, 300-480 minutes). The median blood loss was 65 ml (range, 5-400 ml). Conversion to open surgery was not needed in any of the patients. The median flatus duration was 1 day (range, 1-2 days), and the median hospital stay was 6 days (range, 4-12 days). Three patients had superficial wound site infection. Spontaneous anal bleeding was seen in one patient. One patient had pouchitis, and responded to oral antibiotic treatment. One patient had ileus that responded to conservative treatment. There was no mortality.

**Conclusion:** This study is the world's largest TRRP/IPAA case series, in which Vinci Xi robotic platform was used. Xi platform facilitated multi quadrant surgery and showed that a complex surgery such as restorative proctocolectomy could be performed safely in the same session in a robotic way.

**Keywords:** Inflammatory bowel disease, robotic surgery, total proctocolectomy, ulcerative colitis

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## OP-202 [Colon and Rectum Surgery]

# The Comparison of the Effects of Laparoscopic and Conventional Methods on Lung Functions in Colorectal Surgery

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**Objective:** We planned to compare lung functions, complication rates, duration of stay in hospital and intensive care unit in patients undergoing laparoscopic colorectal resection and open colorectal resection.

**Material and Methods:** Our study was carried out between January 2015 and November 2016. While pulmonary function test, six-minute walking test and chest radiography were performed in the preoperative period, six-minute walking test and PFT were performed in the patients who were able to complete the postoperative 3rd day and 5th day. A chest x-ray was taken for patients with indication. Two groups were compared statistically.

**Results:** Sixty-five patients were included in the study. While open surgery procedures were applied in 41 (63.07%) of the patients, laparoscopic procedure was performed in 24 (36.93%) of them. No significant differences were found between the two groups in the preoperative parameters of 6-min walking tests and PFT ( $p=0.996$ ,  $p\geq 0.05$ ). While 6 minutes walking test and PFT could not be completed in the open surgery group on the postoperative 3rd day, they were performed in the laparoscopic group. When the preoperative values of both groups were compared, it was seen that FEV1 and FVC, which are the PFT levels, significantly decreased in the postoperative 5th day ( $p\leq 0,05$ ). When the laparoscopic and open surgery groups were compared in themselves on the postoperative 5th day; the decrease in FEV1 and FEV1/FVC values was seen to be higher in the open group than in the laparoscopic group ( $p\leq 0,05$ ). There was no difference in the other PFT parameters ( $p\geq 0.05$ ). No difference was found between the six-minute walking tests of the two groups on postoperative 5th day ( $p\geq 0.05$ ). Consolidation findings were observed to develop in 10 patients and all of these patients were in the open surgery group ( $p=0.026$ ). When the durations of postoperative stay in intensive care unit were compared; while it was 0.96 days in the laparoscopic group, it was calculated as 3.15 days in the open surgery group ( $p=0.001$ ). When the total hospital stay was examined; it was found to be 5,38 days in the laparoscopic group, and 8,22 days in the open surgery group ( $p=0,001$ ).

**Conclusion:** In laparoscopic colorectal surgery, pulmonary functions, hospitalization and intensive care unit stay and pulmonary complications give more reliable outcomes than the open procedure. We propose and plan to conduct multicenter studies with larger numbers.

**Keywords:** Colorectal surgery, pulmonary function test, six-minute walking test, laparoscopic surgery, pulmonary complication

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## OP-203 [Colon and Rectum Surgery]

# MALAT1: An Effective Marker in Determining the Decision of Adjuvant Treatment in T2-3 Node Negative Colon Cancer

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**Objective:** Although chemotherapy is applied as adjuvant in locally advanced colon cancer, it is controversial especially in T3 node negative cancers. It is not used at all especially in T1-2 node negative disease. Nevertheless, metastasis may develop in some cases in the future. The aim of this study is to identify the markers that could be used to predict the prognosis in such patients and to help initiate adjuvant therapy.

**Material and Methods:** In our study, 100 patients who were diagnosed with colon cancer without lymph node metastasis (T1-3N0M0) and negative prognostic factors were evaluated between 2005 and 2013. The patients with fewer than 15 lymph node dissections were not included in the study. The expression profile of 14 different non-coding RNAs (LncRNA) was analyzed by Real-time PCR method in RNAs obtained from the tumors and normal mucosal tissues of the patients.

**Results:** Of the 100 patients evaluated, 40% were female and 60% were male. The median age was 62 years. Of the primary tumor, 43% was located in the right and 57% in the left colon. Among 14 different LncRNAs, the MALAT1 and HOTAIR expressions were significantly increased in the tumor tissue compared to the normal tissue ( $p < 0.05$ ). Systemic/local recurrence was observed in 17 patients during the 5-year follow-up and high MALAT1 expression was detected in the tumor tissues of these patients (cut-off value: 3.2;  $p < 0.023$ ).

**Conclusion:** High MALAT1 expression level in tumor tissue can be used as an adjunct to adjuvant therapy decision in colon tumors without lymph node metastasis.

**Keywords:** Early stage, colon Cancer, MALAT1, adjuvant therapy

## OP-204 [Colon and Rectum Surgery]

# Long-term Results of Silver Nitrate Irrigation in Perianal Fistula Treatment

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**Objective:** Although surgical treatment of anal fistula is not always curative, there are studies on alternative therapies, especially because of the risk of incontinence. Epithelization of the anal fistula tract prevents spontaneous closure and causes the fistula to persist. Therefore, the use of corrosive chemicals such as Silver Nitrate solution may cause the fistula tract to heal with fibrosis. In conclusion, the closure of the fistula tract can be achieved without surgical intervention. The aim of this study is to determine the clinical recovery rate in the long-term follow-up after irrigation of the anal fistula tract with silver nitrate solution.

**Material and Methods:** This study was carried out as a single-arm study in a single center. Adult patients who had symptomatic crypto-glandular perianal fistulas between June 2012 and July 2014 were included in the study. In a polyclinic setting; while the patient was placed in the lateral decubitus position and after the external orifice of the fistula was determined, a catheter was sent to the fistula tract and it was irrigated with 1% silver nitrate solution. The patients were followed-up in a polyclinic for 2 weeks. Irrigation was repeated in the cases where the flow was not discontinued and the external orifice was open. In the follow-up, the discontinuation of the discharge and the closure of the external orifice were evaluated as improvement.

**Results:** One hundred and eighty-six patients were included in the study. Of the patients, 147 (79%) were male and 39 (21%) were female. The median follow-up was recorded as 50 (7-64) months. In the follow-up of the patients, 82 (44%) of 186 patients had clinical improvement. The median follow-up period of 82 patients without recurrence was found to be 40 (10-62) months. It was found that the rate of recovery in patients ( $n=19$ ) followed up for 20 months or less after the procedure was 36% ( $n=7$ ), the rates of improvement of the patients ( $n=167$ ) followed up more than 20 months were found to increase to 45% ( $n=75$ ). The clinical full recovery rate of the patients describing intermittent discharge was found to be significantly higher than that of patients with continuous discharge (59% vs 39%,  $p < 0.001$ ). No side effects related to irrigation were observed.

**Conclusion:** This study shows that the use of silver nitrate in the treatment of anal fistula has acceptable results. It is a simple, inexpensive, minimally invasive procedure that can be applied without requiring hospitalization, and it is a method that can be used as the first choice in anal fistula treatment because of the improvement rate in long-term follow-up.

**Keywords:** Anal fistula, silver nitrate, perianal fistula, chemical irrigation

## OP-205 [Colon and Rectum Surgery]

# The Prospective Randomized Comparison of Laser Hemorrhoidoplasty and Stapler Hemorrhoidopexy Methods in Symptomatic Hemorrhoidal Disease

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There are various surgical treatment options for symptomatic hemorrhoidal disease that does not respond to medical treatment, and the superiority of the techniques to each other are determined by post-operative recurrence and complication rates. In this study, we aimed to determine the efficacy of stapler hemorrhoidopexy methods and laser hemorrhoidoplasty, which are the most commonly used methods in patients who received operation indications in terms of 1) duration of operation 2) post-operative pain 3) duration of stay in hospital 4) duration for return to daily life and work and 5) recurrences.

Between June 2014 and January 2017, the patients who were operated due to symptomatic grade 3 hemorrhoidal disease underwent prospective randomized laser hemorrhoidoplasty (group 1) and stapler hemorrhoidopexy (group 2); the results were compared. All patients were evaluated in terms of age, gender, duration of operation, postoperative pain, postoperative complications, duration for complete recovery, sitting comfortably, ability to use vehicle, durations for return to work and postoperative satisfaction, and in terms of quality of life and recurrences through SF 36 questionnaire.

A total of 246 patients were operated due to symptomatic grade 3 hemorrhoidal disease. Of the patients, 121 had undergone the conventional hemorrhoidectomy operation in the last 5 years. This patient group was excluded from the study. In 125 patients who participated in the study, the female/male ratio was 1.08/1 and the mean age was 41 years. Sixty patients underwent laser hemorrhoidoplasty and 65 stapler hemorrhoidopexy. While the mean duration of surgery was 16.7 min in Group 1, it was found as 20.16 min in Group 2. The durations for return to daily life and work were found to be shorter in the laser haemorrhoidoplasty group (4.2 and 6.6 days) than in the stapler hemorrhoidopexy group (7.8 and 10.6) ( $p < 0,05$ ). While no bleeding was observed in any patient in Group 1, one patient in group 2 underwent revision due to bleeding. Wound site infection developed in two patients in group 1 and in one patient in group 2; it regressed with advanced medical treatment. There was no statistically significant difference between the two groups in terms of the length of stay in hospital (0.8 vs 0.9 While satisfaction rate was 90% and above in 96% of the patients in Group 1 at the end of the postoperative 1st month, satisfaction over 90% was obtained in 84% of the patients in Group 2. The follow-up period ranged from 11 to 42 months. In this period, 4 (6.6%) of the patients in group 1 and 3 (4.6%) of the patients in group 2 were admitted due to recurrence and single pake excision was performed in the patients. Laser haemorrhoidoplasty technique is a surgical procedure that can be applied easily in operating room conditions, and is more simple and superior than stapler hemorrhoidopexy method in terms of short duration of operation, hospital stay, duration for return to work, patient comfort and satisfaction. However, we believe that a longer follow-up period is needed in order to evaluate the significance in terms of recurrence. We believe that the laser hemorrhoidoplasty technique we have applied can be a good option in the treatment of hemorrhoidal disease.

**Keywords:** Hemorrhoids, laser hemorrhoidoplasty, stapler hemorrhoidopexy

## OP-206 [Colon and Rectum Surgery]

# The Prognostic Significance of the “Circumferential Resection Margin” in Colon Cancer

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**Objective:** The prognostic significance of circumferential resection margin (CRM) involvement in patients undergoing curative resection due to colon cancer was investigated.

**Material and Methods:** The prospectively recorded clinicopathological data of 339 colon cancer patients (pT3-pT4) who underwent radical resection in Dokuz Eylül University, Faculty of Medicine, Department of Colorectal Surgery between January 2005 and January 2009 were examined. In histopathological examination, CRM was defined as the closest retroperitoneal adventitial soft tissue margin to the deepest penetration of the tumor.

**Results:** CRM positivity was observed in 117 patients (34.5%). A significant relationship was found between CRM involvement and degree of differentiation, tumor invasion depth, lymph node involvement, venous invasion, lymphatic

invasion, tumor invasion border type and local recurrence ( $p<0.05$ ). In multivariate analysis, it was found that venous invasion positivity and tumor invasion depth were independent prognostic factors on CRM ( $p<0.05$ ). The frequency of local recurrence was found to be increased in the patients with CRM positivity compared to the patients with CRM negativity ( $p<0.01$ ). Disease-free survival ( $355\pm74$  days) was significantly lower in patients with CRM involvement than in patients without CRM involvement ( $609\pm45$  days) ( $p<0.05$ ). In multivariate analysis, the presence of metastasis and CRM involvement was found to be an independent prognostic factor on disease-free survival ( $p<0.01$ ;  $CI=0.128-0.625$  and  $p<0.05$ ;  $CI=0.276-0.926$ ).

**Conclusion:** CRM involvement in colon cancer has been found to be associated with advanced tumor spread, increase in local recurrence and decrease in disease-free survival. CRM positive patients may benefit from postoperative adjuvant chemotherapy and radiotherapy because of increased risk of local and systemic disease. The interpretation of this prognostic factor should be routinely included in standard histopathological reports of patients with colon cancer.

**Keywords:** Colon cancer, prognostic significance, circumferential resection margin (CRM)

## OP-207 [Pancreas Surgery]

# The Effect of Hospital Volume on Mortality, Morbidity, and the Number of Dissected Lymph Nodes in Whipple for Periapillary Region Tumors

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**Objective:** Since it was first performed, pancreaticoduodenectomy (PD) has been known to decrease morbidity, mortality and hospital stay, and increase the number of dissected lymph nodes and discharges from the hospital without complications. It is thought that the improvement of the results of a complex surgery such as PD may be associated with experience and hospital volume.

**Material and Methods:** Two hundred and thirteen patients who underwent PD with the preliminary diagnosis of periampullary region tumor in Gazi University Department of General Surgery between January 2008 and January 2016 were included in the study. The patients were divided into 4 groups according to the years of operation as 2008-2009 (Group A), 2010-2011 (Group B), 2012-2013 (Group C), and 2014-2016 (D group). The rates of pancreatic fistula, duration of postoperative hospitalization, mortality rates, morbidity rates, and dissected lymph nodes were compared in the groups.

**Results:** The ages of the patients were between 14 and 87, and the mean age was  $59,71\pm13,23$ . Of 213 patients, 87 (40.9%) were female and 126 (59.1%) were male. The mean follow-up period of the patients included in the study was found to be  $21.53\pm5.5$  months. Hospital stay was minimum 1 and maximum 85 months. According to the distribution of pathologic diagnoses of patients, 63 (29.6%) of the patients had a well-differentiated adenocarcinoma, 52 (24.4%) of the patients had moderately-differentiated adenocarcinoma, and 21 (9.9%) of them had poorly-differentiated adenocarcinoma. In the pathology results of the patients, 107 (50.2%) had T3 tumors, 53 (24.9%) had T2, 15 (7%) had T4 and 12 (5.6%) had T1 tumors. No pathological malignancy was encountered in 26 of the patients (12.2%). In 135 (63.4%) of the 213 patients, the tumor was located in the pancreatic head, it was located in the ampulla in 33 (15.5%), in the distal bile ducts in 24 (11.3%), and in the duodenum in 14 (6.6%) patients. Standard PD was performed in 194 patients and pylorus-preserving PD in 18 patients. Vascular resection was performed in 11 patients (5.2%) including 9 portal vein resections and 3 superior mesenteric vein resections. As pancreatic anastomosis technique, classic duct-to-mucosa technique was performed in 112 patients (52.6%), Blumgart technique in 90 patients (42.3%), Hieldenberg technique in 6 patients (2.8%), and pancreatic-gastrostomy technique in 5 patients (2.3%).

The quality and duct width of the pancreas tissue were found to be associated with fistula. It was found that 1 and 3-year survival decreased in cases with metastasis positive lymph nodes and cut-off value could be taken as 13 for the dissected number of lymph nodes. It was predicted that a better staging would be performed as the number of dissected lymph nodes increased. It was seen that as the hospital volume increased, mortality and morbidity rates, hospital stay and fistula rates decreased.

**Conclusion:** Considering the relationship between the hospital volume and result; the surgeon's experience increases as the volume increases. A comprehensive knowledge of anatomy can improve the quality of the surgery. As a result; morbidity and mortality rates decrease, the number of dissected lymph nodes increases and the length of hospital stay decreases.

**Keywords:** Periapillary Region, pancreaticoduodenectomy, hospital volume-result, number of lymph nodes

## OP-208 [Pancreatic Surgery]

# The Evaluation of All Surgical Margins through the Sampling of Pancreatic Surgical Resections with Proper Macroscopic Methods: Surgical Pathology Experience with 285 cases

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**Objective:** The evaluation of the surgical resections performed for the treatment of patients with pancreatic neoplasms through the most accurate and modern methods is important in terms of prognosis/oncology.

The aim of this study is to introduce the surgical pathology parameters to pancreatic surgeons with a large number of cases, and to present and emphasize the examinations of pancreatic surgery samples through proper applications.

**Material and Methods:** We retrospectively evaluated 285 pancreatic surgery specimens between 2008 and 2018. We evaluated the surgical margins of pancreatic samples as superior mesenteric artery (SMA) and vein (SMV), resection (R), posterior (P), anterior (A), superior (S), inferior (I), peri-choledochal (PC), choledochus (C) and duodenal serosa (DS). The distance to surgical margin or serosa was recorded in millimeters.

**Results:** The demographic and diagnostic information of the patients will be presented in detail. The positive surgical margins in 285 cases are as follows: SMV 24 (8.4%), SMA 10 (3.5%), R 11 (3.8%), P 5 (1.7%), A 15 (5.2%), S 7 (2.4%), I 2 (0.7%), PC 4 (1.4%), C 5 (1.7%), and DS 4 (1.4%). These rates will be presented according to tumor diagnosis and anatomic location.

**Conclusion:** It is important to examine the surgical specimens of patients with pancreatic neoplasms in whom resection can be performed with the correct methods and to include their minimum data in the pathology report. All retroperitoneal surgical margins and duodenal serosal involvement in required cases should be included in the report.

**Keywords:** Pancreas, surgical margin, pathology

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## OP-209 [Pancreatic Surgery]

# Which Severe Pancreatitis Patients Will Late Complications Develop in?

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**Objective:** Severe pancreatitis is a condition that is seen in 20% of all pancreatitis with high mortality and morbidity. It was aimed to predict late complication development in severe pancreatitis.

**Material and Methods:** A descriptive case control study was planned. The patient who was treated with severe biliary pancreatitis between January 2013 and January 2018 was included in the study. The demographic data of the patients, and the lymphocyte percentages at admission and in first 48 hours were recorded. Computerized abdominal tomographies taken in the 7th or 10th day after the admission, in the first month and follow-up tomographies were examined. Pseudocyst, walled off necrosis, localized fluid collection and portal vein thrombosis in the 6-month period after the hospitalization were evaluated as complications. Patients were divided into two groups according to complication status. Descriptive statistics such as number and percentage were used in statistical evaluations. Chi-square test was used to compare the categorical data. The t-test was used for the comparison of continuous data suitable for normal distribution and Mann-Whitney U test was used for the comparison of continuous data not suitable for normal distribution. A p value of 0.05 or less was considered significant in the analyses.

**Results:** One hundred and sixty-seven patients were evaluated during the study. Of the patients, 89 were female, 78 were male, the male/female ratio was 1.1, mean age was 65.4±16.4 and the age range was 19-93. There were 55 patients in the complication group. The percentage of lymphocytes in the group without complication was 10.3 (7.9) and it was 7 (6) in the group with complication. There was a difference between the groups (p=0.009. In the ROC curve analysis, the area under the curve was 62.5%, and when the lymphocyte value was 10.3%; the sensitivity was 74.5%, the specificity was 50% and the p value was 0.009. It was observed that the cases in whom lymphocyte percentage at the admission was low but recovered within 48 hours remained without complications. It was observed that the cases in whom lymphocyte percentage at the admission was normal but significantly fell within 48 hours had complications. Chronic lymphocytic leukemia was detected in one of the 3 cases in whom late-stage complications developed and had lymphocytosis at the beginning. No additional disease was observed in the other two.

**Conclusion:** Lymphocyte percentage is associated with late complication development in patients with severe pancreatitis. It should be noted that the risk of complications may be high in patients with a percentage of lymphocytes below 10.3.

**Keywords:** Severe pancreatitis, pseudocyst, walled off necrosis, lymphocytopenia

## OP-210 [Pancreatic Surgery]

# The Use of miRNAs as a Diagnostic Marker in Pancreatic Ductal Adenocarcinomas in Preoperative Period

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**Objective:** MicroRNAs (miRNAs) are small non-coding RNA molecules that act in many biological processes within the cell and are effective in the formation of many cancers. In this study, we aimed to investigate the expression of miRNAs in signaling pathways that are effective in tumor formation in patients with pancreatic cancer, and to determine their effect on the prognosis.

**Material and Methods:** Sixty patients who underwent surgery for pancreatic cancer in our department between 2011 and 2017 and for whom ethics committee approval was received were evaluated. The expression profiles of 20 miRNAs, collected from the blood of the patients during and after the surgery, were analyzed using Real-Time PCR method. The blood of 22 healthy individuals was determined as control group. With the obtained findings, disease-free survival/overall survival was evaluated using SPSS statistics program.

**Results:** When the blood samples of 60 patients were compared with the blood of 22 healthy individuals, 16 miRNAs were found to be high and 4 miRNAs showed low expression. While miR-21 and miR-10b showed a significant increase in miR-200c patient blood, a significant decrease was found in miR-143 expression ( $p < 0.05$ ). Eleven of 60 cases died within the first 9 months after the operation. When the operative blood of the 11 patients with a shorter life span was compared with the blood of 49 patients, the miR-21 expression was 3.76 times higher in the blood of 11 cases and the miR-145 was 2.49 times less ( $p = 0.0217$ ,  $p = 0.0374$ ).

**Conclusion:** Although further studies and validation are required, our findings suggest that miRNA expression profiles in the blood can be used as a biomarker in the diagnosis and follow-up of patients with pancreatic cancer.

**Keywords:** Pancreatic Ductal Adenocarcinoma, miRNA, RT-PCR

## OP-211 [Pancreatic Surgery]

# The Comparison of Neutrophil-Lymphocyte Ratio and Platelet-Lymphocyte Ratio with Ranson Criteria in Acute Biliary Pancreatitis

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**Objective:** In this study, we aimed to compare the neutrophil to lymphocyte ratio (NLR) and platelet-lymphocyte ratios (PLO), which are among the parameters that show the inflammation in the early period and allow to predict the severity of pancreatitis, with Ranson scoring system, and to see whether their increase was directly proportional with the severity of pancreatitis.

**Material and Methods:** The patients who were treated in the General Surgery Clinic of Bursa High Specialty Training and Research Hospital between 2011 and 2017 were retrospectively screened and hospital records, files and contact information of 353 acute biliary pancreatitis patients were examined. NLR and PLO values of all patients were calculated and statistically compared with Ranson criteria and duration of hospital stay.

**Results:** Of the 353 patients, 231 were female and 122 were male; the mean age was 61.93. Mean values of the other parameters were found. It was 209,75 for AST, 303,01 for LDH, 12592,41 for leucocytes, 9,92 for NLO, 223,16 for PLO and 5,56 for hospitalization period. In addition, the distribution of Ranson criteria was shown. The patients were divided into two groups according to

the Ranson criteria as mild pancreatitis (Ranson 1-2) and as severe pancreatitis (Ranson > 3). While the number of patients with mild pancreatitis was 316, it was 37 with severe pancreatitis. These two groups were compared with NLR, PLO and the length of hospital stay.

**Conclusion:** NLO and PLO values obtained by easily applicable and low cost tests can be used as a new marker and as a marker of pancreatitis severity. Further studies with larger patient series are needed for them to be used as a new scoring system.

**Keywords:** Inflammation, acute biliary pancreatitis, lymphocytes, neutrophils, platelets.

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## OP-212 [Colon and Rectum Surgery]

# Robotic Rectum Cancer Surgery with da Vinci Xi System

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**Objective:** It is suggested that da Vinci Xi™ system, which is the most current model of robot technology, can perform the multi quadrant abdominal operations without the help of laparoscopy and without the need for repositioning of the robot and trocar. However, the literature data on this subject is limited. In this study, we aimed to evaluate the effect of this robotic system on rectal cancer surgery, which is a multi quadrant surgery.

**Material and Methods:** The study included patients in whom robotic mesorectal excision were performed with the diagnosis of rectum adenocancer between December 2014 and February 2018 by using the Vinci Xi™ system. Data were prospectively recorded and evaluated retrospectively. Demographic information, intraoperative findings, histopathological data and postoperative 30-day results were analyzed.

**Results:** A total of 131 patients were included in the study. Of the patients, 76 (58%) were male and 55 were female; the mean age was 58.7±10.9 years. Lower anterior resection was performed in 17 patients and abdominoperineal resection was performed in 14 patients. In all operations, the abdominal and pelvic stages were completed without the need for a second deployment of the robot and without changing the location of the trocar. The mean duration of the surgery was 318.4±107.9 min and the bleeding amount was 125.0±154.0 ml. Intraoperative complications developed in three patients (2.3%). The procedure was converted to open surgery in two patients (1.5%). The mean number of lymph nodes removed was 25.1±11.8. The incidence of incomplete mesorectal fascia integrity was 4.6%. The mean duration of hospital stay was 6.6±3.6 days and postoperative morbidity rate was 19.7% (adynamic ileus=12.2%, anastomotic leakage=3.8%, intraabdominal abscess=1.5%, pulmonary embolism=1.5% and rectovaginal fistula=0.7%).

**Conclusion:** The da Vinci Xi model makes it possible to perform a fully robotic surgery for rectal cancer operations. This feature of the robot allows the surgeon to benefit from the advantages of robotic surgery in all stages of surgery.

**Keywords:** Rectum cancer, robotic mesorectal excision, da Vinci Xi system

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## OP-213 [Colon and Rectum Surgery]

# Robotic Technique in Rectal Cancer Surgery: Comparison with Laparoscopy

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**Objective:** Despite the increasing use of robotic surgery, especially in the treatment of rectal diseases, it has not yet been shown to have a clear superiority to laparoscopic surgery. In this case, the heterogeneity of the techniques used in current publications and the surgeon experience play an important role. The aim of this study was to compare the perioperative and short-term postoperative results of total robotic and total laparoscopic rectal cancer surgery performed by experienced surgeons.

**Material and Methods:** The patients in whom rectum cancer surgery was performed by two surgical teams between December 2014 and August 2017 were included in the study. Demographic data of the patients, perioperative and short-term postopera-



tive results were compared. Case matching was performed using the parameters of body mass index (BMI), tumor type and tumor location. In addition to these analyzes, two modalities in middle and lower rectum tumors were compared in the subgroups of gender, obesity (BMI 30 kg/m<sup>2</sup>), advanced age ( $\geq 65$  years) and neoadjuvant treatment.

**Results:** One hundred and seventy-eight patients were included in the study (Robotics, n=100 and Laparoscopic, n=78). TME was performed in 65 (65%) patients in the robotic group, and in 66 (85%) patients in the laparoscopic group (p=0.003). Conversion to open surgery [n=2 (2%)/n=1 (1%), p=0.7], the presence of diversion ileostomy [n=67 (67%)/n=56 (72%), p=0.49], estimated blood loss (134 $\pm$ 62 ml/83 $\pm$ 46 ml, p=0.47), first bowel movement [2 $\pm$ 1 days/2 $\pm$ 2 days, p=0.23], the presence of complications [n=23 (23%)/n=19 (24%), p=0.83], and the length of hospitalization [7 $\pm$ 4 days/9 $\pm$ 4 days, p=0.5] were similar in both groups. The duration of operation was longer in the robotic group (321 $\pm$ 102 min/204 $\pm$ 67 min, p<0.001). The rate of incomplete mesorectum in TME patients was similar [(5%/3%), p=0.68]. In obese patients undergoing robotic TME, hospital stay was short (7 $\pm$ 2/9 $\pm$ 4 days, p=0.013) and the number of lymph nodes was higher (30 $\pm$ 19/23 $\pm$ 10, p=0.018).

**Conclusion:** Minimally invasive rectal cancer surgery is safe in experienced hands and provides satisfactory results on a short-term oncological basis. Despite long duration of operation, the use of robots especially in obese patients may improve the quality of surgical treatment.

**Keywords:** Laparoscopic surgery, rectum cancer, robotic surgery, total mesorectal excision

## OP-214 [Colon and Rectum Surgery]

# Is the Opening of a Stoma the Mortality Prediction of a Surgeon?

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**Objective:** In colorectal surgery, stoma surgery is a more morbid procedure than other surgical procedures. In contrast to stoma surgery, primary anastomosis is probably preferred in patients with less comorbidity, lower stage tumors and no peritonitis. Although the surgeon's opening stoma in a patient is not a cause of mortality, it is obvious that the morbidities observed will negatively affect the quality of life of the patients and the consequences of this decision will be severe. The aim of this study was to determine whether the surgeon who decided to open a stoma had a prediction acquired in terms of mortality.

**Material and Methods:** All patients who underwent ileostomy and colostomy between January 2008 and July 2015 were included in the study. Demographic data, operative indications, operation conditions and operative information of the patients were retrospectively reviewed from the records kept prospectively in the hospital database. The death records of the patients were obtained from the registry office in June 2017. The whole study group was evaluated within the first 30 days (short) and long term postoperatively. In both time periods, the groups were divided as those who died and as those who are alive, and the statistical significance was examined. The etiology of the statistically different time periods was evaluated as benign and malignant, and by being separated as emergency and elective, the operative conditions were evaluated in terms of their effects on mortality.

**Results:** The study was performed on 413 patients in whom a stoma was opened within the specified time. Demographic data, operation conditions, indications and stoma types of the patients are given in Table 1. The difference between the short-term and long-term mortality of the patients with stoma was found to be statistically significant (p<0.05). It was found that the difference between the groups with short and long-term mortality was statistically significant. It was found that, independent of the etiology, the patients who were operated under emergency conditions had a higher mortality rate (2,810 times) in the early period (p<0,05). The long-term statistical difference was found in the patients operated under emergency conditions, and the mortality rates of the patients who underwent emergency surgery due to malignancy were statistically significantly higher (p<0.05).

**Conclusion:** In our series; no matter whether the operative conditions were emergency or elective and the underlying cause was benign or malignant, the mortality rates were observed to be high. This result shows that the mortality rates in the patients with stoma are high, regardless of conditions or causes. It is seen that the underlying malignancy, sepsis or comorbidities are effective on the surgeon's decision to open a stoma in the patient, considering the subsequent morbidity and mortality rates. Despite the decrease in the stoma surgery in the current surgical approach, we think that the decision of stoma necessity is a predictor of a possible mortality in the short and long-term period. In the scoring systems predicting mortality in future colorectal surgery, the stoma should be evaluated as a procedure increasing the mortality prediction in addition to the surgical procedure performed.

**Keywords:** Stoma, ostomy surgery, mortality prediction

## OP-215 [Colon and Rectum Surgery]

# Our Experiences of Laparoscopic Anterior Rectopexy in Rectal Prolapse

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**Objective:** Rectal prolapse is a clinical condition that usually causes serious social and medical problems with constipation and incontinence. In parallel with the recent advances in the field of laparoscopy, open surgical treatment has been replaced by laparoscopic procedures in the treatment of rectal prolapse. In our study, we aimed to present the treatment results of our patients who underwent laparoscopic anterior rectopexy.

**Material and Methods:** The files of patients diagnosed with full-thickness rectal prolapse between the years 2015 and 2018 were examined retrospectively. Demographic and clinical features of 26 patients undergoing laparoscopic anterior rectopexy were recorded. The patients who underwent open surgery, had incomplete prolapse and in whom simultaneous surgery was performed were excluded from the study.

**Results:** Of the patients, 19 (73.1%) were female and 7 (26.9%) were male; the mean age was 42 (20-67). The most common complaint for admission was difficulty in defecation and prolapsus. On physical examination, 5 (19%) patients had simultaneous rectocele. Before the operation, 22 (84%) of the patients underwent defecography and 21 (80%) of them underwent colonoscopy. Laparoscopic anterior rectopexy was performed in all patients. The mean duration of surgery was 90 (50-130) min. Oral nutrition was started in all patients on the first postoperative day. The mean hospital stay was 3.1 (2-4) days. Wound site infection developed in three (11.5%) patients and it recovered with medical therapy. No problems were observed in the controls of the first week. It was seen that the complaints recovered completely in 23 (88.5%) patients and partially in 2 (7.7%) of them in the first-month postoperative control. Complaints did not recover in one (3.8%) patient. The mean follow-up period was 18 (3-36) months. No recurrence was observed in any patient.

**Conclusion:** Laparoscopic anterior rectopexy is an effective treatment approach that can be applied safely in full-thickness rectal prolapse. It is one of the treatment options that provides good symptomatic relief with acceptable recurrence rate and minimal morbidity.

**Keywords:** Rectal prolapse, laparoscopy, anterior rectopexy

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## OP-216 [Colon and Rectum Surgery]

# The Use of Self-expanding Metal Stent in Colonic Obstructions Caused by Malignancy and External Pressure

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**Objective:** It was aimed to achieve decompression instead of emergency surgery, to avoid stoma, to provide the passage in inoperable cases and to improve the quality of life in patients with obstruction caused by intraluminal tumor or external pressure, and to evaluate the preoperative and postoperative complications, clinical success, the survival and follow-up periods after stenting in patients who underwent self-expanding metal stents (SEMS).

**Material and Methods:** We evaluated metallic colonic stents in 206 patients who were diagnosed with acute colonic obstruction in January 2008 and January 2014, and in whom tumoral mass or external tumoral compression was detected in the rectum, rectosigmoid and descending colon. The stents were placed under colonoscopic direct vision and fluoroscopic control. In the first 24 hours after the procedure, all patients were evaluated through standing direct abdominal graphy (SDAG). Elective surgeries were performed in operable cases after adequate decompression and they were referred to oncology clinic. The patients who were not operated for metastatic disease and other reasons were referred to the oncology clinic for neoadjuvant therapy. The assessment of stent success was made according to the provision of passage, correction of the metabolic status, and ability to perform anastomosis by avoiding stoma; it was evaluated in inoperable cases according to the duration of life without obstruction.

**Results:** The mean age of the patients (110 M; 96 F) was 68 (48-77). Tumoral mass was found in the rectum in 65 (31.5%) of the patients, in the rectosigmoid in 101 (49%), in the sigmoid and descending colon in 28 (13.5%). Twelve (6%) patients had exter-

nal pressure due to pelvic malignancy or carcinomatosis. Four of these patients underwent re-stenting. The mean length of the obstructed segment was found to be 5.4 cm (2-8 cm). TTS method was applied in 160 (78%) patients and non TTS method in 46 (22%) patients. Stenting duration was found as 18 min (10-35min) on average. Of the patients undergoing stenting, 182 were operated in our clinic. Elective laparoscopic surgery was performed in 123 (67.5%) patients and open surgery in 59 (32.5%). Four patients (1.9%) were operated with emergency open surgery because of perforation during stenting. Of the operated patients, 62 (34%) had rectum tumor and 120 (66%) had colon tumor. Seventy-six (41.7%) patients were operated after neoadjuvant treatment. The mean life span was 49 days (13-125 days) in patients with pelvic malignancy.

**Conclusion:** SEMs are effectively used in the palliation of the tumoral masses causing complete obstruction in the rectum and descending colon, and in bridging to elective surgery. The rate of success in overcoming the obstruction is high. It can be a good alternative in converting the emergency operation to elective. It increases the quality of life of inoperable cases with the elimination of stoma without any need for operation.

**Keywords:** Colorectal obstruction, decompression, metallic stent

## OP-217 [Colon and Rectum Surgery]

# The Importance of Manometric Examination Before Recurrent Perianal Fistula Surgery

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**Objective:** The perianal fistula is a pathway between the perianal skin and the anorectal lumen with granulation tissue and cannot be closed due to infection in the gland; it is the chronic stage of perianal infections. Fistula diagnosis can be made clinically. In clinical evaluation, the aim is to determine the fistula anatomy, the fistula pathway or pathways according to the sphincter complex. Surgery in perianal fistula always brings the risk of recurrence and anal continence disorders. In particular, the risk of anal incontinence is high after surgery of atypical fistulas and recurrent fistulas. Anal manometry is an anorectal physiology test that can be used for the objective evaluation of sphincter pressures before surgery.

**Material and Methods:** The patients who were admitted to our proctology unit due to recurrent perianal fistula between January 2015 and August 2017 were included in the study. Preoperative anal manometry was performed in all patients. The demographic data and anal manometry findings of the patients were retrospectively reviewed from the files and electronic records.

**Results:** Twenty-four patients were included in our study. Of the patients, 12 were male and 12 were female; the mean age was 35. In the preoperative manometric examination, the resting pressure was 47-73 mm hg and the squeeze pressure was 98-130 mm hg.

**Conclusion:** During the fistula, fissure and hemorrhoid surgery, it was shown that sphincter defect developed in approximately half of the patients due to lack of attention to the sphincter structures. The most common cause of postoperative fecal incontinence is perianal fistula surgery. In a 312-case series where fistula surgery was totally evaluated, a 24% minor incontinence occurred. It is known that the risk increases in proportion to the amount of muscle cut. If the sphincter pressures are detected before the recurrent fistula surgery with manometric examination, changes can be made in the surgical technique, especially in patients with low sphincter tonus. Operations without muscular cuts (adhesive, plug, flap) reduce postoperative incontinence, but the success rates of these operations are controversial. The results of the anal manometric examination will guide us in the surgical technique that will be applied in recurrent fistula surgery.

**Keywords:** Recurrent perianal fistula, anal incontinence, anal manometry

## OP-218 [Endocrine Surgery]

# Thyroidectomy Complications and Influencing Factors

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**Objective:** Thyroidectomy is an operative procedure which is frequently applied in surgical practice. Despite low mortality rates nowadays, annoying complications such as postoperative hypocalcemia and vocal cord paralysis may develop. The aim of this study was to investigate the demographic, clinical, operative and postoperative characteristics of the patients who underwent thyroidectomy, and to determine the factors leading to complications.

**Material and Methods:** Four hundred and fifty patients who underwent thyroidectomy in our clinic between October 2010 and 2015 were included in the study. Demographic, clinical, operative and postoperative data of the patients were retrospectively reviewed and recorded. The obtained data were statistically compared.

**Results:** The mean age in the study was  $48.3 \pm 9.8$ , and the M/F ratio was 0.23 (85/365). The most common complications following thyroidectomy were hypocalcemia (25.2%), vocal cord paralysis (2.3%), bleeding (1.2%), and surgical site infection (0.2%). While permanent hypocalcemia was observed at a rate of 0.5%, all patients with vocal cord paralysis recovered without sequelae. The preoperative presence of Graves disease and the presence of papillary thyroid carcinoma in postoperative pathological examination increase the risk of especially hypocalcemia, a cause of morbidity ( $p > 0.05$ ). The presence of malignancy findings in female gender, USG and FNAB, and complementary thyroidectomy due to recurrence were found to be significant in terms of hypocalcemia and vocal cord paralysis ( $p < 0.05$ ). In multivariate analysis, most important factors affecting the development of postoperative hypocalcemia and vocal cord paralysis were complementary thyroidectomy ( $p < 0.001$ ) and malignancy ( $p < 0.035$ ).

**Conclusion:** Postoperative hypocalcemia and vocal cord paralysis are the most common complications associated with thyroidectomy. Complementary thyroidectomy applied in patients with recurrence developing due to improper thyroidectomies, the presence or risk of preoperative malignancy significantly increase the morbidity rates by affecting the method and type of the surgery to be applied. Bilateral total thyroidectomy should be the first choice in the treatment of nodular thyroid diseases and the surgical treatment of Graves disease, where it is not possible to leave healthy tissue. The use of modern hemostasis tools and the large number of pre-diagnostic examinations are not effective on complication rates. In order to reduce the complication rates; the use of peroperative nerve monitoring apparatus, performing thyroidectomy in a way to protect the parathyroid gland vascularization, and where necessary, parathyroid autotransplantation may create a positive effect on morbidity rates.

**Keywords:** Thyroidectomy, hypocalcemia, vocal cords, thyroid

## OP-219 [Endocrine Surgery]

# The Contribution of Preoperative Computed Tomography and Magnetic Resonance Imaging in Patients Evaluated as Negative Primary Hyperparathyroidism through Ultrasonography and Scintigraphy

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**Objective:** Preoperative ultrasonography (USG) and sestamibi scintigraphy are the standard methods for the treatment of sporadic primary hyperparathyroidism (pHPT), and the focused approach is common in patients in whom localization is performed. The success of the operation increases, and the complication rates decrease in patients in whom preoperative localization procedure has been performed. In this study, the contribution of computed tomography (CT) and magnetic resonance imaging (MRI) to the localization, in pHPT patients in whom localization could not be performed with USG and sestamibi, was investigated.

**Material and Methods:** As a result of retrospective review of 321 patients operated with the diagnosis of pHPT between January 2007 and December 2016; 36 (11.2%) patients who underwent 4-D CT (4D-CT) or MRI among the 55 (17.1%) patients in whom localization failed through USG and sestamibi were included in the study. Nineteen patients (5.9%) in whom Internal Jugular Vein (IJV) side sampling and selective venous sampling were performed, or in whom 4-gland exploration was planned due to accompanying thyroid pathology were excluded from the study. The sensitivity and accuracy of CT and MRI and their contribution to surgery were examined.

**Results:** There were 17 patients who underwent CT as the advanced imaging method and 19 patients who underwent MRI. Twenty-six (72.2%) of the patients who were operated had a history of multinodular goiter, 11 patients (30.6%) had Kocher incision scar due to head and neck surgery, and 6 (16.7%) patients had been operated for primary hyperparathyroidism and they had persistent disease in which surgical success could not be achieved. There was no statistically significant difference between preoperative and postoperative serum Ca<sup>++</sup> and PTH values. Preoperative localization was performed in 29 (80%) cases. While the sensitivity of CT was 76.5% and the accuracy was 76.5%, the sensitivity of MRI was found as 84.2% and the accuracy rate as 84.2%; there was no significant difference between the two techniques ( $p < 0.05$ ). There was a significant correlation between the findings of the operation and the localization of imaging methods. When the surgical approach was considered; focused approach or unilateral neck exploration (NE) was performed in 23 (63.9%) patients and bilateral NE was performed in 13 (36.1%) patients. Biochemical cure was achieved in all 36 patients (100%). There was no recurrence or persistent disease during a mean follow-up of 34 (12-55) months.

**Conclusion:** In most of the patients who were evaluated as negative primary hyperparathyroidism through USG and sestamibi, preoperative localization was detected in with preoperative advanced imaging of 4D-CT and MRI, and focused intervention in most of them was successfully performed. Therefore, we believe that it is appropriate to examine the neck and mediastinum with 4D-CT or contrast-enhanced MRI before the operation in order to increase the surgical success and to prevent persistent disease.

**Keywords:** Primary hyperparathyroidism (pHPT), preoperative localization, computed tomography, magnetic resonance imaging

## OP-220 [Endocrine Surgery]

# Is Nerve Monitorization Necessary in Parathyroid Surgery?

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**Objective:** Injury of the recurrent laryngeal nerve in parathyroid surgery is an important complication. Experienced surgeons can see and protect the nerves. However, the risk of hemorrhage may also increase during this procedure. In order to avoid these complications, the use of intraoperative nerve monitorization has been increasing in recent years. While these complications are reduced, on the other hand, complaints such as swallowing difficulties occur at a higher cost. In this study, we aimed to investigate the efficacy and necessity of using intraoperative nerve monitoring in parathyroid operations.

**Material and Methods:** A total of 113 patients who underwent parathyroidectomy operation between January 2016 and December 2017 were included in this study. Intraoperative nerve monitorization was applied in 51 patients in the first group. Monitorization was performed via the endotracheal tube using electrode contacting the glottis. When the tip of the device touches the nerve, a voice and image appear on the device screen by vagal stimulation. A stimulation with the value of 0.5 mAmp is considered positive, and 2 mAmp and above is considered negative if there is no response. The mean age of patients in whom nerve monitorization was performed was 54.9 years. The mean duration of hospitalization was 3.2 days (1-7 days). The indication for surgery was parathyroid adenoma (90.2%) in 46 patients, hyperplasia in 5 patients (9.8%), and the most common localization of the lesion was right lower parathyroid (43.1%). In the second group, parathyroidectomy was performed in 62 patients with a mean age of 46.8 years without nerve monitorization. The hospitalization period was 1.8 days (1-4 days) on average. In this group, the indications for surgery were adenoma in 56 patients (90.3%) and hyperplasia in 6 patients (9.7%). The most common site of the lesion was right lower parathyroid (35.5%). In the nerve monitorization group; while hemovac drainage was used in 15 patients (29.4%), it was used in 7 patients (11.3%) in the group in which monitorization was not performed.

**Results:** The complications in both groups were compared using Mann-Whitney U and Chi-square tests. None of the patients had permanent hoarseness in the monitorization group, 4 patients had transient hoarseness (7.8%), and one patient had roughness in voice. In the second group, permanent hoarseness was detected in 1 patient, transient hoarseness in 2 patients and roughness in voice was detected in 1 patient. Hematoma was found in 1 patient, dysphagia in 1 patient, and transient hypocalcemia in 18 patients in the monitorization group; in the second group, hematoma was not found in any of the patients, but 2 patients had dysphagia and 17 patients had transient hypocalcemia.

There was no statistically significant difference in terms of hoarseness, roughness, hemorrhage and transient hypocalcemia in both groups. Interestingly, the use of drains during the surgery and the length of hospitalization after surgery were significantly lower in the group in which monitorization was not performed. On the other hand, monitorization did not cause an increase in the rate of difficulty in swallowing.

**Conclusion:** According to the results of this study; in terms of the parameters we evaluated, there was no significant difference between the groups in which monitorization was and was not performed. This may be explained by the fact that patients in the non-monitorized group were operated by experienced surgeons as in the other group. Further studies and data are needed to achieve precise results on the need for monitorization.

**Keywords:** Parathyroid, nerve monitorization

## OP-221 [Endocrine Surgery]

# Low Postoperative Parathormone in Patients Undergoing Unilateral Parathyroidectomy in Primary Hyperparathyroidism

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**Objective:** After the removal of the pathologic gland in primary hyperparathyroidism (pHPT), the expected condition is the normalization of parathormone (PTH) in the early postoperative period. Sometimes, even in patients in whom focused surgery is performed, PTH decreases below normal levels. This suggests that the function of normal parathyroid glands may change in the hyperparathyroid period. The aim of this study was to evaluate the relationship between preoperative and postoperative biochemical values and the rate of postoperative PTH value in pHPT in which focused surgery was performed.

**Material and Methods:** The data of the patients who underwent unilateral or focused surgery due to pHPT between 2014-2017 and whose follow-up information could be reached were evaluated. The patients who had undergone bilateral intervention, who had previously undergone thyroidectomy or parathyroidectomy were excluded from the study. Patients were divided into 2 groups according to PTH values (<15pg/ml or > 15pg/ml) in the postoperative 1st day: The patients with the values below PTH<15 pg/ml were in group 1, and the patients with postoperative value of PTH> 15pg/ml were in group 2. Age, gender, preoperative PTH, calcium, urea, creatinine, magnesium, phosphorus, alkaline phosphatase, the presence of other parathyroid on the same intraoperative side, the diameter and volume values of the pathological parathyroid gland removed, postoperative 0th day calcium and phosphorus; postoperative 1st and 2nd day calcium, phosphorus, magnesium, parathormone, and alkaline phosphatase values were compared between these two groups.

**Results:** In this period; complying with the criteria, 57 patients (45 F, 14 M) with a mean age of 53.8+14.9 (17-85) were evaluated. There were 22 patients (15 F, 7 M) in Group 1, and 37 patients (30 F, 7 M) in group 2. There was no significant difference between the groups in terms of age, gender, preoperative calcium, urea, creatinine, phosphorus, PTH, alkaline phosphatase levels, the presence of normal parathyroid gland on the same side intraoperatively, the largest diameter of the glands removed, the volume of the glands removed, the levels of calcium, phosphorus at the postoperative day 0th and 1st day. PTH value was 13.82+9.22 vs 38.38+26.11 on the postoperative 0th day, and alkaline phosphatase was 83.59+24.08 vs 194.17+427.7 on the 0th day (p=0.41); all values were significantly higher in group 2. Preoperative magnesium levels were 1.88+0.16 mg/dL, and 2.01+0.18 mg/dL (p<0.001) in group 1 and 2, respectively, and the magnesium was 1.73+0.12, and 1.83+0.23 (p=0.41) on the postoperative 0th day; the magnesium levels were significantly higher in the second group.

**Conclusion:** Low postoperative PTH value may be related to the suppression of pathologic gland on the normal parathyroid functions. This effect is not associated with the preoperative biochemical values and the volume of the parathyroid gland extracted. The high level of alkaline phosphatase in patients with normal postoperative parathyroid hormone levels is associated with high bone turnover and may be related to the high calcium cycle stimulating the parathyroid gland. Since magnesium is required for parathormone secretion and target organ response, low levels of magnesium in the group with low parathormone may be associated with delayed PTH secretion in the normal parathyroid gland.

**Keywords:** Primary Hyperparathyroidism, parathormone, parathyroidectomy

## OP-222 [Endocrine Surgery]

# The Role of Intraoperative Nerve Monitorization in the Reduction of Vocal Cord Paralysis in Thyroid Surgery

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**Objective:** Vocal cord paralysis (VCP) is the most important cause of malpractice lawsuits related to thyroid surgery in the world and in our country. In addition, in forensic medicine evaluations in our country, there is a tendency to evaluate unilateral VCPs as complication, and bilateral VCPs as malpractice. Recently, the use of intraoperative nerve monitorization (IONM) is increasing, in addition to routine visualization of the nerve, which is the gold standard for the protection of recurrent laryngeal nerve (RLN). In this study; we aimed to evaluate the effect of IONM use on VCP.

**Material and Methods:** The patients who underwent thyroidectomy due to malignant or benign thyroid disease in our clinic between 2014-2016 were divided into two groups according to IONM use. The patients in whom IONM was not used constituted Group 1, and the patients in whom it was used constituted group 2. All patients in Group 2 underwent standard IONM. The type of procedure in the lobe, recurrence, Graves disease, substernal goitre, and central dissection were defined as high-risk interven-

tions. All patients underwent preoperative and postoperative vocal cord examination. Vocal cord paralysis (VCP) was evaluated according to the number of nerves at risk. VCP was defined as transient when it recovered before 6 months, as permanent when it continued after the sixth month.

**Results:** The study included 494 patients with a mean age of  $46.8 \pm 12.6$  years. Of the patients, 211 (115 F, 25 M) were in Group 1, and 283 (221 F, 62 M) were in Group 2. Age and gender distribution of the groups were similar. In group 1 and 2, 149 (70.6%) and 198 (70%) bilateral interventions were performed, respectively, and the number of lobes and RLNs at risk were 360 in Group 1 and 479 in Group 2. In Group 1 and 2, the total number of RLNs with VCP was 33 (9.2%) and 27 (5.3%), transient 27 (7.6%) and 23 (4.8%), and permanent 6 (1.7%) and 4 (0.8%) ( $p=0.005$ ,  $p=0.230$ ,  $p=0.341$ , respectively); the ratio of total vocal cord paralysis was significantly lower in the monitorization group. Bilateral VCP developed only in 4 patients in group 1, and it was significantly higher than in the monitorization group ( $p=0.033$ ). In the second group; because intraoperative signal loss occurred in the first intervention in 9 patients in whom bilateral intervention was required, and because RLN injury in 1 patient was detected intraoperatively in group 1, the operation was ended and the possibility of bilateral VCP development was prevented. The rate of gradual thyroidectomy was significantly higher in Group 2 ( $p=0.049$ ).

**Conclusion:** The use of IONM in thyroidectomy significantly reduces the incidence of total VCP. Although the rates of temporary and permanent VCPs are lower in patients in whom IONM is performed, there is a need for more cases to reveal the statistical difference. If signal loss develops due to the information that IONM gives about intraoperative RLN function, the termination of the operation may minimize the development of bilateral VCP, which is a catastrophic complication, although rare.

**Keywords:** Intraoperative nerve monitorization, vocal cord paralysis, thyroidectomy

## OP-223 [Breast Diseases and Surgery]

# The Evaluation of Response to Treatment in Breast Cancer Patients Given Neoadjuvant Chemotherapy

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**Objective:** Neoadjuvant chemotherapy (NAC) has become a standard treatment for patients with locally advanced breast cancer (LABC). NAC is performed to enable breast-conserving surgery in early-stage breast cancers, to make LABC operable by reducing the stage of the disease, and to reduce the need for axillary dissection in patients with axillary involvement. Our aim is to evaluate the factors that may affect the response to chemotherapy in invasive breast cancer patients with clinical stage 1-3 in the light of the Miller Payne Regression Rating Classification (MP I-V) which is the evaluation of the breast tumor response to NAC and to present the data of our clinic.

**Material and Methods:** In this study, 68 consecutive patients who underwent surgery after NAC in the Department of General Surgery of Ondokuz Mayıs University Medical Faculty Hospital between January 2012 and December 2017 were retrospectively examined. The pathological response (MP I-III, IV-V) to NAC was compared in terms of tumor size, axillary response status, molecular classification of tumor [Luminal A, Luminal B, HER2 (+), Triple negative breast cancer (TNBC)], histological grade, lymphovascular invasion (LVI) status and MP score. Chi-square test was used to compare categorical data. Significance level was accepted as  $p < 0.05$ .

**Results:** The median age of the patients was 52 (29-85) years. Forty-five patients underwent breast conserving surgery (BCS) and sentinel lymph node biopsy (SLNB)+/-axillary dissection (AD), 23 had mastectomy and SLDB+/-AD. No significant relationship was found between the age of patients ( $<50$ ,  $\geq 50$  years), tumor size (T1, T2, T3), LVI (yes, no) and histological grade (I-II, III) and the pathological response to NAC by MP score ( $P=0.16$ ,  $P=0.15$ ,  $P=0.13$  and  $P=0.31$ , respectively). In HER2 positive (86% MP IV-V) and TNBC tumors (75% MP IV-V); the pathological response to NAC according to MP score was found significantly higher than Luminal A (32% MP IV-V) and Luminal B (43% MP IV-V) ( $P=0.04$ ). In patients with clinical lymph node positive (cN+) in the axilla prior to treatment, the best axillary response was seen in the HER2 (100% negative) and TNBC groups (50% negative) in the histopathological examination after SLNB or axillary dissection ( $P=0.003$ ). According to MP I-II, pathological axillary lymph node status was significantly negative in patients with MP IV-V after NAC (83% vs 20%,  $P < 0.001$ ).

**Conclusion:** Patients in the HER2 and TNBC groups respond significantly better to the NAC according to the MP scores compared to those in the Luminal A and B groups. In patients in the HER2 and TNBC groups, breast conserving surgery can be provided by NAC administration and axillary dissection can be avoided.

**Keywords:** Breast cancer, neoadjuvant chemotherapy, miller payne

## OP-224 [Breast Diseases and Surgery]

# The Comparison of Intraoperative or Postoperative Radiotherapy Applied to Patients with Early Stage Breast Cancer as Boost in Terms of Local Recurrence and Cosmetics

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**Objective:** The aim of this study was to compare the intraoperative (IO) or postoperative (PO) Boost Radiotherapy (RT) in patients with early breast cancer with respect to local recurrence and cosmetic results.

**Material and Methods:** In the last 60 months in our clinic, the patients who underwent breast-conserving treatment (BCS) were examined according to the recorded data. A total of 98 patients who received IORT during breast-conserving surgery (BCS) were classified as Group A, and 99 patients who had similar molecular structure and received it after Whole Breast Radiotherapy (WBRT) were classified as group B. The groups were compared with the chi-square test with the help of the LENTSOMA scale (V06-7/2003) in terms of local recurrence in the 35th and 38th months follow-up, and in terms of cosmetics 1 year after the end of the entire RT.

**Results:** Average age was 49 in A, and 52 in B. Histopathological structure of tumors all of which are Luminal A or B; 90 invasive ductal in and 8 invasive lobular in A; this number was 84/5 in B, and 10 cases in Group B are mixed. Tumor diameter was 18 (4-30mm) in group A, 19 (6-30) mm in B, and there was nodal involvement in 11 patients in A, and in 17 patients in B.

In group A, 10 Gy electron was administered with mean 865 MU (773-954), 90% reference isodose 6mEV energy and 5.4 cm (4-7) diameter application tube; in Group B, an average of 12 (10-16) Gy electron or photon was administered by being divided into 5 doses after WBRT. Boost area was planned to contain 15-20 mm around the tumor bed. No local recurrence was observed in group A, and two cases had recurrence in group B in the 20th and 32nd months. According to LENTSOMA, 34/24 cases in A and B were defined as Grade 0, 41/41 as Grade 1, 21/29 as Grade 2 and 2/5 cases as Grade 3. Chi-square test result was  $p > 0.05$  in the comparison of both recurrence and cosmetics.

**Conclusion:** Although there was no significant difference between the two groups in the statistical analysis, the results of cases receiving IOBoostRt were superior in terms of local control and better cosmetically.

**Keywords:** Breast cancer, breast protective treatment, intraoperative radiotherapy, cosmetic, local recurrence

## OP-225 [Breast Diseases and Surgery]

# The Factors Affecting the Reliability of 18F-FDG PET/CT in Detecting Axillary Metastasis in Breast Cancer

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**Objective:** This study was carried out to determine the factors affecting the reliability of 18F-FDG PET/CT in detecting axillary metastasis in breast cancer.

**Material and Methods:** The records of 232 patients who were operated for invasive breast cancer between January 2013 and September 2017 and staged with 18F-FDG PET/CT were retrospectively reviewed. Histopathological examination of axillary lymph nodes was used as a reference to assess the efficacy of 18F-FDG PET/CT in detecting axillary metastases.

**Results:** In 134 (57.8%) cases, 18F-FDG PET/CT was positive for axillary involvement. Axillary metastasis was detected in 164 patients (70.7%) in histopathological examination. The sensitivity, specificity, positive predictive value, negative predictive value and overall accuracy of 18F-FDG PET/CT for detecting axillary metastases were 72.56%, 77.94%, 88.8%, 54% and 74.1%, respectively. False negativity and false positivity rates were 27.4% and 22%, respectively. In the univariate analysis, patient age, estrogen receptor, axillary lymph node SUVmax value, 18F-FDG PET/CT determined tumor size and lymph node size determined with 18F-FDG PET/CT were related to the reliability in detecting axillary metastasis. In multivariate analysis, axillary lymph node



SUVmax and the tumor size determined with 18F-FDG PET/CT were found to be independent variables related to axillary metastasis. The reliability of 18F-FDG PET/CT in detecting axillary lymph node metastasis increases as the primary tumor size ( $\geq 19.5$  mm) and axillary lymph node SUVmax ( $\geq 3.2$ ) value increase.

**Conclusion:** 18F-FDG PET/CT should not be routinely used for axillary staging in breast cancer (especially when the tumor size is small) since it does not eliminate the need for sentinel lymph node biopsy. In cases where 18F-FDG PET/CT is used, the threshold values for SUVmax of axillary lymph node should be taken into consideration together with the visual data in detecting the axillary metastasis.

**Keywords:** Axillary metastasis, sentinel lymph node, SLNB, breast cancer, PET, PET/CT

## OP-226 [Breast Diseases and Surgery]

# The Positive Predictive Value of BI-RADS Category 4 in Breast Lesions for Breast Cancer

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**Objective:** In recent years, BIRADS classification has been used to form a common language among the clinics for the early diagnosis of breast cancer. Thus, the changes in the breast are evaluated in terms of the risk of malignancy, and low-risk patients are saved from unnecessary invasive procedures. The aim of this study was to investigate the positive predictive value in breast lesions classified in BI-RADS (Breast Imaging Reporting and Data System) 4 category in breast imaging modalities performed by a single experienced radiologist in our center.

**Material and Methods:** The records of patients with BIRADS 4 breast lesions diagnosed at Başkent University Ankara Hospital between June 2011 and December 31, 2017 were retrospectively reviewed. PPV was calculated for patients who underwent biopsy or at least two years of clinical follow-up. Radiographic and pathological findings were compared.

**Results:** The biopsy rate of the 243 lesions classified as BI-RADS 4 was 88% (214). Malignancy was detected in 102 (46%) of 214 patients. PPVs for the subcategories 4A, 4B and 4C are 13% (7/51), 25% (8/32) and 66% (13/19), respectively. The most common malignancy was invasive ductal carcinoma (72%). The risk of breast cancer was high in patients with advanced age, clinically palpable breast mass in USG and with asymmetric density findings in mammography.

**Conclusion:** Due to the fact that our breast USGs were performed by a single experienced radiologist in our center, PPV was found higher for malignancy than in the literature and the rate of malignancy in the subcategories 4B and 4C was higher than 4A.

**Keywords:** Positive predictive value, breast, BI-RADS

## OP-227 [Breast Diseases and Surgery]

# Our Results in the Treatment of Idiopathic Granulomatous Mastitis Disease

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**Objective:** Idiopathic granulomatous mastitis (IGM) disease was first described in 1972. Although it is a benign disease, it mimics breast cancer. Radiological or pathological follow-up should be performed in terms of chronic disease or concurrent breast cancer in the long-term follow-up.

**Material and Methods:** The patients who were called and received were included in our study after performing the control examinations. The duration of treatment, follow-up period, treatment, recurrence, size of lesions, which breast it is in, localization, pathology results, mammography results and breast USG results were recorded. The results were analyzed by Chi-Square test using SPSS Statistics 20.0 program.

**Results:** The total number of patients was 16 (M: 0 F: 16). The mean age of the patients was  $36.5 \pm 5.32$  (27-44). It was found that granulomatous mastitis disease increased as age increased ( $p=0.023$ ), recurrences were not related to the duration of treatment ( $p=0.533$ ), the volume of the affected breast tissue had no effect on the duration of treatment ( $p=0.452$ ), and the type of treatment directly affected the duration of treatment (surgery+steroid) ( $p=0.026$ ).

**Discussion:** Although IGM is a benign disease, it is difficult to diagnose and treat radiologically. It is usually confused with breast cancer. Different treatments are applied in IGM such as medical (antibiotics only, steroids only, NSAIDs or methotrexate+steroid+antibiotics), surgery (surgery, steroid+surgery, antibiotic+surgery) and maximal (antibiotic+steroid+methotrexate+surgery). Autoimmunity, pregnancy, lactation, hyperprolactinemia, use of oral contraceptives, local trauma to the breast, alpha-1 antitrypsin deficiency and smoking are among the reasons accused.

**Conclusion:** When we examine the patients with IGM in our clinic, we think that surgery and steroid treatment should be applied together.

**Keywords:** Antibiotic, surgical treatment, granulomatous mastitis, steroid

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## OP-231 [Hernia Surgery]

# The Comparison of the Effects of Inguinal Hernia Surgery on Pain, Sensory and Sexual Functions in the Healing Process

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**Objective:** The aim of our study is to compare the effect of open and closed inguinal hernia surgery on pain, sensory and sexual functions in the healing process.

**Material and Methods:** In our prospective randomized clinical study, ASA 1-2 male patients between the ages of 18-65 with unilateral inguinal hernia were included in the study. The patients were randomized to receive the Lichtenstein open method and TEP closed method. Our study was planned by including a total of 50 patients and the patients will be evaluated in preoperatively, and in the postoperative 1st and 6th months. The results of 23 patients (12 patients with open method, 11 patients with closed method) with short term postoperative first month data will be shared. Preoperative and postoperative 1 month sexual functions of the patients were performed with International Sexual Function Index (IIEF), pain assessment with visual analogue pain score (VAS), and inguinal region sensory evaluation with two-point discrimination test. IIEF includes five main subjects including erectile function (EF), orgasmic function (OF), sexual desire (SD), sexual satisfaction (SS) and general satisfaction (GS), and each section is scored separately. The results of the questionnaire and the results of two point discrimination tests were statistically analyzed and their significance was evaluated as  $p < 0.05$ .

**Results:** The EF, OF, SS and GS scores of the patients who underwent open and closed methods did not differ in the preoperative and postoperative period. When the mean value of the SD and when the open technique in itself were evaluated, there was no difference in the preoperative and in the first month ( $p=0.065$ ); the mean SD values in the first month were found higher than in the preoperative period in the closed method, and a statistically significant difference was found. When the VAS mean values of the groups were evaluated; when the open and closed technique groups were evaluated within themselves, the first month VAS scores were found to be lower than the preoperative period and a significant difference was found ( $p < 0.001$ ). The 1st month mean values of two-point discrimination test results were 86.9 in the open method group and 55.8 in the closed technique group. The difference between them was statistically significant ( $p=0.011$ ). In the open technique group, the 2 point discrimination test values did not differ in the preoperative period and in the postoperative 1st month ( $p=0,238$ ), whereas the mean postoperative 1st month mean values were significantly lower in the closed technique group than the mean values in the preoperative period ( $p=0,018$ ).

**Conclusion:** The results showed that both of the surgical techniques in early inguinal hernia repair reduced pain in the early period, and the superiority of the closed technique was revealed in terms of sexual function and sensory healing process.

**Keywords:** Pain, sexual function index, IIEF, two point discrimination, inguinal hernia

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## OP-232 [Hernia Surgery]

# The Use of Bupivacaine and Dexamethasone in the Management of Seroma and Pain in Laparoscopic Preperitoneal Hernia Repair

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**Objective:** Inguinal hernia repairs are the most common operations in general surgery clinics today and laparoscopic repairs are increasing. Postoperative seroma is a complication in patients undergoing TEP (total extraperitoneal hernia repair). We aimed to investigate the effectiveness of local anesthetic and steroid use in the preperitoneal area to reduce pain and prevent seroma formation in the postoperative period.

**Material and Methods:** Forty patients with inguinal hernia who were admitted to the general surgery outpatient clinic of Ankara Atatürk Hospital were selected randomly. All patients had bilateral primary inguinal hernias. Those with irreducible, bilateral and recurrent hernia were excluded from the study. The patients were given antibiotic prophylaxis under general anesthesia and Bilateral TEP Hernioplasty was performed by the same team. A 12x15 cm of prolene graft with the same brand was placed in each patient. Tacker was used for fixing. Before awakening from anesthesia, twenty patients who were in the first group were given 8mg dexamethasone and 15 cc 0,5% bupivacaine into the preperitoneal cavity after the gas was discharged. In the other 20 patients that formed the second group, nothing was given to the preperitoneal space after gas discharge. On the postoperative 1st day, pain assessment was performed in patients with VAS. The patients were evaluated for seroma on the postoperative 1st, 7th and 30th days.

**Results:** The mean VAS value in the 1st group in which dexamethasone and 0.5% bupivacaine were administered was found as 3 for the postoperative early period, and as 2 for the postoperative 1st day. In the second group, the VAS value in the postoperative early period was 6 and 3 on the postoperative 1st day. Seroma was not detected in the 1st, 7th and 30th-day controls. In the second group, seroma was detected in 1 patient in the 7th-day control and it was emptied with injector and antiinflammatory treatment was given.

**Conclusion:** The administration of dexamethasone and bupivacaine to the preperitoneal space is an effective method especially for the prevention of early postoperative pain. In our study, no significant difference was found in terms of seroma.

**Keywords:** Total extraperitoneal hernia repair, TEP complication, bupivacaine and steroid use

**OP-234 [Colon and Rectum Surgery]****Stem Cell Application in Low Anterior Resection Syndrome****Esin Kaplan<sup>1</sup>, Öznur İnan<sup>2</sup>, Mehmet Yazıcı<sup>3</sup>, Bahattin Tapkan<sup>1</sup>, Hasan Ökmen<sup>1</sup>, Soykan Arıkan<sup>1</sup>**<sup>1</sup>*Department of General Surgery, İstanbul Training and Research Hospital, İstanbul, Turkey*<sup>2</sup>*Department of Experimental Research, Development and Training Center, İstanbul Mehmet Akif Ersoy Training and Research Hospital, İstanbul, Turkey*<sup>3</sup>*Department of Pediatric Surgery, İstanbul Training and Research Hospital, İstanbul, Turkey*

Low anterior resection syndrome is a general title for the development of sexual dysfunctions such as rectal and urinary incontinence and impotence due to neuronal damage during mesorectal excision. Stem cell is the name given to undifferentiated cells that can regenerate in the body of an organism by continuing to divide for a very long time and thus create differentiated cells. Mesenchymal stem cells (MSCs) are durable cells that are available in many tissues and are replicable. MSC sources are bone marrow (BM) and adipose tissues. Adipose tissue-derived stem cell supply is now readily available within hours with a series of centrifugation and filtration processes without using culture media. The aim of this study is to evaluate the effects of adipose tissue-derived stem cell (ADSC) on rectum and sphincter innervation damage in low anterior resection syndrome. In this study, 22 3-month old female Sprague Dawley rats were used. Two groups were formed with 10 rats in each group. In addition, 2 rats were used to obtain adipose tissue. After performing total mesorectal dissection, Group 1 was left as a control group. After performing total mesorectal dissection in Group 2, the stem cells were injected into the pelvic region. EMG measurements were performed on 7th and 14th days before the rats were taken to operation. EMG measurements were made before the operation (control: 0.44±0.28, stem cell: 0.62±0.25), on the postoperative 7th day (control: 0.24±0.20, stem cell: 0.37±0.26), and on the 14th day (control: 0.30±0.25, stem cell: 0.51±0.24). When the two groups were compared, no significant improvement was observed in the stem cell group compared to the control group (p>0.05). Although there was no statistically significant difference in EMG measurements, the stem cell group lost significant weight. The mean weight of the control group was 285.2±19.7, and the mean weight of the stem cell group was 258±14.1. As a result of the study, no significant difference was found between the stem cell and non-stem cell groups and EMG measurements. Significant weight loss was observed in the animals in the stem cell group. In this model, the therapeutic effect of the stem cell on the syndrome was not detected. It can be supported with other studies.

**Keywords:** Incontinence, stem cell, LARS

## OP-235 [Colon and Rectum Surgery]

# Surgical and Long-Term Oncologic Outcomes of Radiofrequency/Microwave Ablation Therapy with Primary Organ Resection and/or Metastasis Resection in Patients with Synchronous and Metachronous Liver Metastases in Colorectal Cancer

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**Objective:** The aim of our study is to evaluate the short-term surgery and long-term oncologic outcomes in 38 patients with colorectal cancer (CRC), in whom metastasis resection and/or radiofrequency/microwave ablation (RFA/MWA) treatment were performed for 135 metastatic (CRLM) lesions along with primary organ resection in a total of 86 sessions.

**Material and Methods:** After the required permissions and informed consent, 38 consecutive cases 24 (63.2%) of whom were male, and 14 (36.8%) were female with a mean age 60.9±10.4 (median: 62.0; Min: 33-Max: 80) and who underwent colorectal resection besides metastasis surgery and/or RFA/MWA with the diagnosis of CRC and synchronous/metachronous CRLM between 1999-2017 were included in the prospective study. After the history, physical examination, laboratory, colonoscopy, biopsy, 3D-CT, MRI and, if necessary, PET-CT results and comorbidities were evaluated with multidisciplinary approach; surgical treatment for primary CRC and CRLM, and the timing and shape of neoadjuvant chemotherapy and/or radiotherapy were decided. Localization, stage, differentiation; number, location, size of the metastasis, adjacencies, major vascular structures and proximity to bile ducts, liver volume, primary tumor and metastasis characteristics, dependent variables, complications, mortality and survival time were the independent variables. Chi-square, Student's and Mann-Whitney U tests were used for the cross tables. Survival analysis was evaluated with Kaplan-Meier product limits and the survival curves of the subgroups were evaluated with logrank test.

**Results:** Primary tumor was localized in the rectum in 17 (44.7%) cases and multifocal in 7 (18%) cases. Twenty (52.6%) of the cases were UICC stage IV and CRLM metastases developed as metachronous in the other patients. In 33 (86.8%) cases, the differentiation was at medium or high degree. Ten patients (26.3%) received preoperative chemotherapy, 15 patients with tumor located in the rectum/recto-sigmoid had preoperative radiotherapy, and 13 (34.2%) patients had VEGF antibody therapy. During the sessions; mostly, anterior/lower anterior resection was performed in 19 (43.2%) cases. Colorectal resection was performed in all cases in the first session, CRLM resection in 18 (47.4%) cases, RF/MW ablation in 18 cases (47.4%); colorectal re-resection was performed in 6 (19.4%) of 31 cases operated in the second session, CRLM resection in 18 (58.1%) and L ablation in 27 (87.1%); L resection in 4 cases in the 3rd sessions, both L resection and ablation were performed in 6 cases; only percutaneous RFA/MWA ablation was performed in the 4th and 5th sessions. Of the lesions in which resection/ablation was performed, 52.6% were located in the L segments in the right lobe. In the early period, one patient died on the 52nd day due to bladder fistula and infection caused by L resection; one patient with cirrhosis died on 87th day due to oesophageal variceal bleeding after ablation. Twenty-seven (71.1%) cases died after a mean follow-up of 48.1±42.4 (median: 32.2; Min: 2-Max: 176.7) months. The 1-year and 5-year survival rates were 89.5% and 33.3%, respectively.

**Conclusion:** According to the results of this prospective study, RFA/MWA as a complement to primary tumor and metastasis resection has been shown to be safe with low complication rates in CRLM and has a positive effect on survival.

**Keywords:** Liver metastases, colorectal cancer surgery, microwave ablation, oncologic results, radiofrequency ablation, survival analysis

## OP-236 [Colon and Rectal Surgery]

# Retrorectal Tumors: 10-Year Experience in a Single Center

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**Objective:** Retrorectal or presacral masses are rarely seen. The incidence of these tumors in the reference centers was reported as 1/40.000-63.000. Although retrorectal tumors are mostly benign, they may be malignant, as well. Treatment is essentially complete resection. There are not many case series in the literature about retrorectal tumors. In this study, we aimed to evaluate the diagnosis, treatment and follow-up of retrorectal tumors operated in our clinic in the last 10 years.

**Materials and Methods:** The patients who were operated with the diagnosis of retrorectal tumor in our clinic between 2008-2017 were evaluated retrospectively. The cause of admission of the patients, methods used in diagnosis, surgical technique, histopathology of the tumor, morbidity and long-term follow-ups were recorded.

**Results:** A total of 13 patients were operated with the diagnosis of retrorectal tumor in a 10-year period. Seven of the patients were female and 6 were male. The mean age at the time of diagnosis was 44.2 years (18-66). The most common symptom was presacral pain and swelling in 11 (85%) patients. One (7.5%) patient had discomfort during defecation, and dyspareunia was the main complaint in one patient (7.5%). Pelvic CT was used in the diagnosis of 1 patient (7.5%), pelvic MRI in 11 patients (85%), and both methods were used in the diagnosis of 1 patient (7.5%). Only one patient underwent biopsy with preoperative imaging in addition to pelvic MRI. Eleven patients (85%) were operated with posterior approach. Two patients (15%) were operated with anterior approach. No patient underwent surgery with anteroposterior approach. No morbidity and mortality were observed in any of the patients. The mean follow-up period was 41.2 months (12-72). One patient had recurrence 8 months after the first operation. The patient was operated with a posterior approach again and no recurrence was observed at the end of 64 months. Five patients (38.4%) had tailgut cyst, 5 patients (38.4%) had schwannoma, 2 patients (15.3%) had dermoid cyst and 1 patient (7.6%) had neurofibroma. The pathology of all patients was benign.

**Conclusion:** Retrorectal tumors are rare. It is often incidentally found and if the patient is symptomatic. In addition to physical examination, pelvic tomography, MRI imaging and endo ultrasonography are used for diagnosis. Imaging-guided biopsy is not recommended due to malignant cell transplantation, hematoma and infection risk. Total excision is recommended because of the potential for malignancy, local complications and recurrence potential. Posterior, anterior or combined surgical approach can be planned according to the localization of the tumor. Retrorectal tumors are mostly discussed in the literature as case reports or as limited case series, and larger series are needed to clarify the treatment plan and the prognosis of malignant cases.

**Keywords:** Presacral tumor, retrorectal tumor, surgical technique

## OP-238 [Endocrine Surgery]

# Efficacy of Intraoperative Ultrasound in Targeted Parathyroidectomy

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**Objective:** Effective treatment of primary hyperparathyroidism is possible with an excision following a definitive and accurate detection of the adenoma. The current approach is to provide complete treatment with targeted parathyroidectomy, which is a minimally invasive procedure instead of bilateral neck exploration in localized cases. Intraoperative parathormone (PTH) monitoring is an invaluable method in making sure the intraoperative surgical resection which leads to the reduction of reoperative surgery but also has disadvantages like extending the duration of operation and causing additional costs. In addition, many centers are not capable of performing intraoperative PTH monitoring. At this point, is a reliable targeted parathyroidectomy possible regardless of intraoperative PTH? That question rises immediately. Ultrasound (US) is a method with high sensitivity in locating the localized parathyroid adenomas. The aim of our study is to evaluate the safety of targeted parathyroidectomy in terms of definitive treatment in primary hyperparathyroidism by intraoperative ultrasound.

**Material and Methods:** The study included a retrospective cohort analysis of prospectively recorded patient data at our center. One hundred and sixty seven patients with primary hyperparathyroidism were included in the study. Preoperative sestamibi imaging and US were applied in all patients. The localized adenoma suspected lesions were excised by intraoperative US guided targeted parathyroidectomy. It was confirmed that the tissue excised by the frozen section examination was parathyroid tissue and the procedure was terminated.

**Results:** Of the patients, 139 were female and 28 were male. Average age was 54 years. Three of 7 patients whose postoperative PTH did not decrease underwent bilateral neck exploration and three and a half parathyroidectomies were performed due to the lack of pathological adenoma. Postoperative scintigraphy revealed new mediastinal adenoma in one patient, while the other two patients were diagnosed with parathyroid hyperplasia. In one patient, postoperative scintigraphy didn't detect pathology, while control ultrasonography showed a second adenoma at the inferior of contralateral thyroid lobe. The success rate of intraoperative ultrasonography guided targeted parathyroidectomy was 95.8%.

**Conclusion:** Recent advances in primary hyperparathyroidism caused by sporadic adenoma increase interest in targeted parathyroid surgery. Precise determination of the localization of adenoma or adenomas is essential for the success of targeted parathyroidectomy. Sensitivity, specificity and positive predictive value of USG in the diagnosis of adenoma in primary hyperparathyroidism were reported as 60%, 91% and 92%, respectively. The realization of targeted parathyroidectomy accompanied by US performed by an surgeon intraoperatively has big advantages such as the minimization of surgical dissection and operation time, the reduction of the need for intraoperative PTH monitoring, and the detection of additional pathologies (adenoma-hyperplasia) and the protection of patients from reoperative interventions. According to the data obtained from our study; In the absence of intraoperative PTH, we believe that it is possible to administer the targeted parathyroidectomy under US guidance and after the removal of the lesion, as a safe surgical protocol that can reduce the need for bilateral neck exploration and provide a positive result in definite treatment, in case the area is ultrasonographically observed with "second look".

**Keywords:** Parathyroidectomy, adenoma, ultrasound, scintigraphy

## OP-239 [Endocrine Surgery]

# The Relationship between Preoperative ACR-TIRADS Scores and Postoperative Thyroid Pathology Results in Patients Scheduled for Thyroid Surgery

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**Objective:** In order to determine the biopsy and surgical indications in thyroid nodules, various risk scoring systems have been formed by taking the ultrasonographic features of the nodules as criteria. American College of Radiologists (ACR-TIRADS) is one of the most recent scoring systems and provides guidance for clinicians by providing standardization in ultrasonography reports. Our aim in this study is to determine the efficacy and safety of ACR-TIRADS in thyroid nodules.

**Material and Methods:** This prospective study included a total of 60 patients (166 nodules) who were admitted to the general surgery outpatient clinic due to thyroid diseases, and 28 patients (79 nodules) who were scheduled for operation as a result of thyroid US. In this study; preoperative thyroid doppler ultrasound was performed by two predetermined radiologists in all patients and each nodule risk score was given based on ACR-TIRADS. Four nodules with the highest risk score were selected in patients with multinodular goiter according to ACR-TIRADS. The thyroid specimens of the 28 operated patients were examined by the same pathologist. A total of 79 nodules were compared in terms of preoperative ultrasound dimensions and ACR-TIRADS scores and postoperative pathology dimensions and results.

**Results:** Of the 60 patients included in the study, 47 were female, 13 were male and of the 28 patients who were operated, 22 were female and 6 were male. The mean age was 47 and 50, respectively. The mean size of the nodules measured by ultrasonography was 20.3 mm (5-85 mm) and the mean size of the nodules measured in the pathology specimens was 18.96 mm (3-90 mm). A statistically significant difference was detected ( $p < 0.05$ ). According to ACR-TIRADS, the total number of nodules with the indication of fine needle aspiration biopsy (FNAB) was 24 and no malignancy was detected in 16 nodules. Although there was no FNAB indication in 10 of the 28 malignant nodules, postoperative pathology revealed malignancy. Papillary microcarcinoma foci were found in 8 of these nodules and the mean tumor size was 5.1 mm. ACR-TIRADS has a sensitivity of 67% and a specificity of 90%; the positive predictive value was 79% and the negative predictive value was 83%.

**Conclusion:** ACR-TIRADS is an easy and effective scoring system for clinical practice. However, in our country where iodine deficiency and multinodular goiter are common, we encounter difficulties in the application of a standard scoring system. In our study; especially in cases with millimetric nodules, it is noteworthy that ACR-TIRADS was not successful in detecting microcarcinomas. Nowadays, the effects of microcarcinomas on long-term survival are controversial.

**Keywords:** Thyroid nodules, TIRADS score, thyroidectomy

## OP-242 [Hepatobiliary Surgery]

# Long Term Results of ALPPS Procedure in Primary and Metastatic Liver Tumors

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**Objective:** Associating liver partition and portal vein ligation (ALPPS) is a recommended liver resection method for liver resection due to bilbro disease especially for the small remaining particle volume. In the first stage of the operation performed in two stages, the liver parenchyma is divided by the open or laparoscopic technique and the portal vein is connected to the diseased side and in the second phase to the diseased lobe, and the segment is removed. In this presentation, we presented the indications, radiological development, complications, recurrence, and mortality results of ALPPS operations performed in our clinic for 5 years.

**Material and Methods:** Between December 2012 and January 2018, 31 patients in Ankara University Hospital underwent ALPPS with different indications. The mean patient age was 54.6 (35-72), and the mean body mass index was 28.12 (20.7-38.3). The indications for surgery were colorectal cancer liver metastasis in 18 patients, cholangiocellular cancer in 6 patients, hepatocellular cancer in 3 patients, neuroendocrine tumor metastasis in 2 patients, gastric cancer metastasis in one patient, and bladder sarcoma metastasis in one patient. One patient did not undergo second stage surgery due to intraabdominal adhesions.

**Results:** The mean time between two surgeries was 18.9 (7-48) days. The mean preoperative liver volume to standard liver volume was calculated as 24.6% (8.8%-45%). The mean volume increase in the liver between the two surgeries was 71.67% (7%-169%). In two of thirty patients whose resection was completed, the surgical margin was microscopically positive (R1) and in 28 patients, the surgical margin was negative (R0). The patients were hospitalized for a mean of 12.52 (5-25) days after the first stage and for 15.8 (5-41) days after the second operation. Four patients had biliary complications requiring biliary percutaneous/endoscopic intervention. No vascular liver complications happened. Thirteen patients (43.3%) had recurrence and 7 of them had it in the liver. The mean recurrence time was 7.5 months after surgery. In 17 patients (56.7%), there was no recurrence in a mean follow-up of 15.6 months. One of the patients who underwent surgery in the second stage died of pulmonary embolism and delayed liver regeneration, and 1 of them died in the same hospitalizations due to pneumonia. While 8 patients died after discharge, one of them died of myocardial infarction and another due to rupture of hepatic artery aneurysms. Six others died due to recurrence and progression of malignant disease.

**Conclusion:** In our experience, ALPPS surgery may be a safe alternative for bilobar or advanced liver tumors with acceptable and progressive preoperative mortality and morbidity. Analysis of a wide range of cases will be useful to determine the risk factors for surgery and to refine the technique according to different indications.

**Keywords:** ALPPS, liver, liver metastasis, tumor

## OP-243 [Hepatobiliary Surgery]

# A Personalized 3-D Model Approach in Liver, Pancreas and Biliary Surgery

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**Objective:** Correct anatomic vascular, tumor and parenchymal imaging method is very important for fewer complications and good preoperative planning in Liver, Pancreas and Biliary Surgery. Three-dimensional modeling as a new approach will be very helpful in this field and surgical training. Portal system distribution, hepatic venous drainage and possible variations of tumor adjacency and bile ducts can be screened more accurately.

**Material and Methods:** Computerized tomography images of 20 patients were transferred to another program to be used in three dimensional modeling in electronic environment by using "DICOM imaging software. The images of veins, bile and parenchymal structures were created with this program.

**Results:** When tumor localization, location of the bile duct injury, the vascular structures and relationships with healthy tissue were compared with other preoperative imaging methods, it was found that the changes affecting the decision were important in revealing the tumor location and its anatomical relationship rather than bile duct injuries. Since it was not possible to compare the patients with the same problem without using this method helping the surgeon to achieve robust safety margins in tumor surgery, histological control was used.

**Conclusion:** We think that this modeling will be useful especially in preventing bile duct injury, postoperative bile leaks and in estimating the liver volume with the access to the robust safety margin of pancreas, and in surgical training as well.

**Keywords:** Liver, pancreas, biliary tract

## OP-244 [Pancreatic Surgery]

# Familial Pancreatic Cancer: Who Should Get Genetic Testing?

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**Objective:** The most effective way to increase the survival rates in pancreatic cancer (PC) is early diagnosis. One of the patient groups who benefit from early diagnosis most is the patient group with the risk of Familial Pancreatic Cancer (FPC). The aim of this study is to determine how many female patients in an average population meet the criteria for genetic testing and screening set by the American Gastroenterological Association (AGA).

**Material and Methods:** Following the approval of the Ethics Committee, the data of 42,945 women who were admitted to the Breast Imaging Center of Newton-Wellesley Hospital between February 2007 and December 2009 were evaluated retrospectively. After a minor revision of the criteria determined by AGA according to the study groups, the patients were divided into 6 groups. The first 4 groups were composed of individuals with the risk of syndromes associated with pancreatic cancer. Group 1 was composed of individuals with the risk of hereditary breast and ovarian cancer, Group 2 was composed of those with the risk of Lynch syndrome, Group 3 was composed of those with a family history of Familial Atypical Multiple Mole Melanoma and Group 4 was composed of those with a family history of FPC. The other two groups were composed according to Mendelian risk prediction models. Group 5 was determined as PancPRO (risk calculation model for PC) and Group 6 was determined as MelaPRO (risk calculation model for malignant melanoma).

**Results:** Of 42,945 patients, 3705 (8.6%) were defined as high risk individuals with FPC. Of these patients, 3.4% were considered as high risk individuals due to familial breast and ovarian cancer syndrome, 2.4% due to Lynch syndrome, 0.1% due to Familial Atypical Multiple Mole Melanoma Syndrome and 0.1% due to family history of FPC. In addition, 2.9% of these patients were identified as high risk individuals by PancPro program and 0.2% by MelaPRO program.

**Conclusion:** When the AGA criteria were applied to an average female population, it was thought that 8.6% of the patients were considered as high risk individuals due to FPC and they could benefit from genetic testing and screening methods. It is thought that the determination of appropriate individuals for genetic testing and screening methods with the help of certain criteria can be useful in early diagnosis.

**Keywords:** Familial pancreatic cancer, high risk individuals, calculation models of genetic risk

## OP-245 [Hernia Surgery]

# The Comparison of the Early Results of Self-Adhesive Mesh and Polypropylene Mesh for Inguinal Hernia Surgery: A Randomized Prospective Study

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**Objective:** Which type of mesh is most suitable for open inguinal hernia surgery is still controversial. In this study, it was aimed to compare the early results of self-adhesive mesh and polypropylene mesh.

**Material and Methods:** Patients to be operated for inguinal hernia between May 2016-June 2017 in General Surgery Clinic of Gazi University were randomly divided into two groups according to the use of self-adhesive mesh Parietex ProGrip™ Mesh (Group 1) or polypropylene mesh (Group 2) after the approval of Ethics Committee of Faculty of Medicine in Gazi University. The groups were compared in terms of parameters such as demographic, clinical and postoperative pain, return to work, and complications.

**Results:** Intergroup comparison in terms of demographic, preoperative data and postoperative pain, duration of analgesic use, returning to work and complications. When we compared self-adhesive mesh application with polypropylene mesh application, we



found that duration of the operation was shorter; early postoperative pain and the need for postoperative analgesics were found to be less. However, the difference between the two groups was not statistically significant in terms of complications.

**Conclusion:** The use of self-adhesive mesh reduces the duration of the operation, postoperative pain and analgesic use.

**Keywords:** Self-adhesive mesh, inguinal hernia, polypropylene mesh

## OP-246 [Hernia Surgery]

# The Comparison of Minimally Invasive Preperitoneal (MIP) Single-Layer Mesh Repair with Desarda Repairs for Inguinal Hernia in terms of Postoperative Chronic Pain

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**Objective:** One of the most important problems after hernia surgery performed with mesh is chronic pain. One way to cope with chronic pain is to stop using mesh by keeping the recurrence rate within the acceptable limits. Desarda repair is a hernia repair method using the patient's own tissue instead of a mesh, and its recurrence rates are within the acceptable limits. It was shown that there was less pain in meshes placed posteriorly compared to those placed anteriorly. In this study, we aimed to compare the minimally invasive preperitoneal (MIP) single-layer mesh repair with Desarda repair methods in terms of prospective and randomized chronic pain.

**Material and Methods:** Two hundred and twenty patients who had primary inguinal hernia between May 2009 and January 2014 and met the study criteria were divided into two groups. MIP was performed in the 1st group and Desarda repair in the 2nd group. Demographic characteristics, durations of the operation, length of hospitalization, returning to daily activity and work, early and late period complications, recurrence, and chronic pain values of the patients were examined and recorded. Patients followed for at least 24 months were included in the analysis. A form containing Inguinal Pain Questionnaire (IPQ), visual analog scale (VAS) and Sheffield scale (SS) were used in the evaluation of the patients.

**Results:** One hundred and four patients in MIP group and 99 patients in Desarda group were analyzed in the first 24 months; 98 patients in MIP group and 94 patients in Desarda group were analyzed in the 36th month. Demographic information, frequency of physical activity, preoperative pain status, average duration of follow-up, duration of operation, duration of hospitalization, returning to daily activity and work were similar. There was no significant difference between two groups in terms of early and late complications, except for pseudohernia. It is interesting that testicular atrophy was not observed in MIP group and testicular atrophy was observed in 3 patients in Desarda group although it was not statistically significant. There was no recurrence in MIP group, and in Desarda group, there was recurrence in 3 patients (3%). This difference was not statistically significant. In the postoperative chronic pain assessment, although VAS values were not statistically significant, they were higher in Desarda group, and SS values were similar. The number of patients who reported pain was similar. In Desarda group, the patients stated that pain did not affect their daily activities, except for one patient who said that it had partially affected his/her daily activity, that he/she had to reduce his/her physical activity and had changed his/her job because of this problem.

**Conclusion:** It was observed that MIP method was superior to these two methods with similar results in the early period in terms of pain in chronic period, the effect of pain on patient life and complications. Therefore, it seems more reasonable to prefer the methods placing the mesh in the preperitoneal area instead of avoiding patch use.

**Keywords:** Inguinal hernia, posterior repair, minimally invasive preperitoneal repair (MIP), Desarda repair, chronic pain

## OP-250 [Gastrointestinal Surgery (esophagus, stomach, small intestines)]

# Minimally Invasive Surgery for Gastric Cancer: An International Multicenter Research

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**Objective:** Minimally invasive surgery is controversial in the treatment of gastric cancer. In this study, it was aimed to compare the clinical and oncologic results of robotic, laparoscopic and open gastrectomy methods in the surgical treatment of gastric cancer.

**Material and Methods:** A study protocol (IMIGASTRIC) was signed among 25 centers in 8 countries in Europe, Asia and North America to compare the surgical methods for gastric cancer in 2015. Under this protocol, preoperative and postoperative surgical, clinical and oncological data of the patients were recorded via internet based system. The recorded data were examined retrospectively and analyzed. The patients were divided into three subgroups as robotic surgery (RS group), laparoscopic surgery (LS group) and open surgery (OS group). The value of  $p < 0.05$  was considered statistically significant.

**Results:** Of the 3688 patients included in the study, 2570 (69.7%) were male, 1118 (30.3%) were female and the mean age was 63.8 (range: 28-91). There were 296 (8%) patients in RS group, 2054 (55.7%) in LS group and 1338 (36.3%) in OS group. The incidence of intraoperative complications was similar in all three surgical methods ( $p > 0.05$ ). Postoperative complication rate was 23% in OS group and it was higher than in RS and LS groups ( $p < 0.05$ ). In RS group, the onset of liquid food intake was on the 2.8th day, the onset of soft food intake was on the 4.6th day and this was statistically earlier than LS and OS groups ( $p < 0.05$ ). During the evaluation of the postoperative mobilization times, it was observed that 81.4% of the patients in RS group walked on the 1st day and this was significantly earlier than LS and OS groups ( $p < 0.05$ ). The mean hospital stay was 9.6 days in RS group and it was significantly shorter than OS and LS groups ( $p < 0.05$ ). When examined according to T stage distributions, it was observed that T1a tumors were significantly higher in RS (18.2%) group, T1b tumors in LS (12.8%) and RS (14.8%) groups, T2 tumors in OS (10.9%) and RS (20.8%) groups, T3 tumors in RS (35.6%) group, T4a tumors in LS (32.6%) group, and T4b tumors in OS (1.9%) group ( $p < 0.05$ ). It was observed that Tis tumors were similar in all three types of surgery ( $p > 0.05$ ). The mean number of lymph nodes dissected was 29.4 in OS group and this number was significantly lower than in RC and LC groups ( $p < 0.05$ ). The mean number of metastatic lymph nodes was 3.6 in RS group and it was statistically lower than in the other groups ( $p < 0.05$ ). R0 resection rate was significantly lower in OS group (93.3%) than in the other groups ( $p < 0.05$ ).

**Conclusion:** Minimally invasive surgical methods for treating gastric cancer are as safe as open surgical methods.

**Keywords:** Gastrectomy, laparoscopic surgery, gastric cancer, minimally invasive surgical procedures

## OP-251 [Gastrointestinal Surgery (esophagus, stomach, small intestines)]

# The Role of Minimally Invasive Surgery for Gastric Cancer Treatment: An Experience of İstanbul Group

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**Objective:** The frequency of gastric cancer varies according to its geographical location and this variation causes significant differences in the treatment of gastric cancer. There are limited data on minimally invasive surgery (MIS) treatment of gastric cancer in Turkish patients carrying the characteristics of Eastern and Western societies. The aim of this study was to evaluate the role of MIS in the treatment of gastric cancer by comparing the results of radical surgery cases performed by the surgeons who completed the learning curve in both MIS and open techniques.

**Material and Methods:** One hundred and ninety-nine consecutive patients with gastric adenocarcinoma in whom radical surgical treatment was performed by two surgical teams between January 2013 and December 2017 were included in the study. Demographic information, previous abdominal operations, comorbid factors, and the perioperative, short-term, postoperative and histopathological results of the patients were evaluated. Postoperative complications were classified as  $\geq 3$  or  $< 3$  according to Clavien-Dindo classification.

**Results:** Of the 199 patients, 53 (27%) had MIS (Laparoscopic 20, Robotic 33) and 146 (73%) had open radical surgery. There was no difference among the groups in terms of age, gender, body mass index and ASA scores. Although the previous abdominal operations of the patients were similar in both groups, the rate of simultaneous surgery was higher in the open surgical group (MIS 18%, open 38%,  $P = 0.009$ ). Total gastrectomy was performed in 146 patients (MIS: 37 (70%), Open: 110 (75%)), and subtotal gastrectomy was performed in 52 patients (MIS: 16 (30%), Open: 36 (25%)) ( $p = 0.432$ ). The duration of the operation in MIS group was longer ( $336.9 \pm 112.1$ ) than in Open Surgery group ( $196.6 \pm 79.2$ ) ( $p < 0.0001$ ). There were no significant differences among the other results such as the total number of lymph nodes removed, mean hospital stay, and perioperative complications.

**Conclusion:** In radical surgical treatment of gastric cancer, the processes to be performed with radical gastric surgery are important in choosing MIS rather than previous abdomen surgeries. Although the duration of the operation is longer, MIS can be applied with the safety margins of standart open surgery in experienced hands and offers oncological efficacy similar to open surgery.

**Keywords:** Robotic surgery, gastric cancer, minimally invasive surgery

## OP-252 [Gastrointestinal Surgery (esophagus, stomach, small intestines)]

# The Efficacy of Hyperthermic Intraperitoneal Chemotherapy (HIPEC) and Early Postoperative Intraperitoneal (EPIC) Chemotherapy For Carcinomatous Peritonitis

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**Objective:** The locoregional progression of gastrointestinal and gynecological cancers usually result in peritoneal carcinoma (PC). The prognosis of PC is poor and the mean survival is approximately 6 months. Better oncologic results can be achieved with HIPEC (Hyperthermic intraperitoneal chemotherapy) and/or EPIC (Early postoperative intraperitoneal chemotherapy) along with cytoreductive surgery in peritoneal carcinomatosis. We planned to present the results of our clinic about the characteristics, pre and postoperative results and total survival of HIPEC or EPIC treatment performed with cytoreductive surgery.

**Material and Methods:** The study includes the patients with malignant carcinomatous peritonitis with colorectal, ovarian, gastric, appendiceal, mesothelioma and pancreatic origin between 2012 and 2018 January. The patients underwent cytoreductive surgery (CS) and HIPEC or EPIC was performed during the follow-ups. Preoperative and postoperative findings were gathered and analyzed retrospectively.

**Results:** In the study, 91 patients underwent 96 procedures. Of the patients, 58 (63.7%) were female and 33 (36.3%) were male. Median body mass index was 24.4 (18-38.9) and median duration of operation was 470 (130-882). The most common comorbidities were hypertension (18.6%) and diabetes mellitus (10.9%). Cytoreductive surgery was performed in 37 (40.2%) patients due to gynecological cancer and due to non-gynecological cancer in 54 (59.8) patients (38 patients with colorectal cancer (43.2%), due to gastric cancer in 5 patients (5.1%), due to mesothelioma in 5 patients (5.1%)). The median peritoneal carcinomatosis index (PCI) was 17 (3-39). The number of patients with CC 0 (Completeness of cytoreduction score) was 48 (52.7). In the study, 32 patients (35.1%) had SC+HIPEC, 20 patients (21.9%) had EPIC+SC and 39 patients (42.8%) had SC alone. The mean follow-up period was 20 ( $\pm$ 16.8) (1-75) months and the mean survival was 41 ( $\pm$ 4) (32-49) months.

**Conclusion:** Complete cytoreductive surgery and HIPEC/EPIC increase the total survival in patients with peritoneal carcinomatosis.

**Keywords:** Early postoperative intraperitoneal chemotherapy (EPIC), hyperthermic intraperitoneal chemotherapy (HIPEC), cytoreductive surgery

## OP-253 [Endocrine Surgery]

# Neck Dissection Experiences for Differentiated Thyroid Carcinomas: What has Changed in Eight Years?

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**Objective:** We aimed to present the patients who underwent neck dissection (ND) with or without thyroidectomy due to differentiated thyroid carcinoma in our clinic.

**Material and Methods:** ND cases were examined in terms of demography, surgical and medical history, laboratory, surgery, histopathology and polyclinic records. Recurrence, secondary intervention, morbidity and mortality results of the patients were evaluated retrospectively.

**Results:** Out of 195 patients who were operated with the diagnosis of malignant tumor except for the patients with medullary thyroid cancer, 34 (17.4%) patients underwent ipsilateral or bilateral central neck dissection and 25 patients (12.8%) underwent functional lateral neck dissection. Functional neck dissection was performed in the cases when thyroid fine-needle aspiration biopsy (FNAB) was malignant (Bethesda 6) and the results of FNAB and/or thyroglobulin washout examination performed in the

lymphadenopathy detected on ultrasonography were positive. Since 2013, neck dissection surgeries have been performed routinely with intraoperative nerve monitoring in all cases. The median age of 59 patients was 47 (14-79), and F/M ratio was 45/14. The rate of prophylactic central ND was 37.3% (n=22). According to the preoperative findings, 11 (18.7%) patients underwent ipsilateral or bilateral central ND, 20 (33.8%) underwent unilateral, and 6 (10.2%) underwent bilateral functional lateral ND. On histopathological examination, the mean number of lymph nodes removed in unilateral central ND was  $7.2 \pm 0.9$ , and  $22.2 \pm 1.71$  in unilateral functional lateral ND. The mean thyroglobulin (Tg) for PTC was 1.3 ng/ml (0.2-11) in the postoperative 3rd month control. The mean follow-up period was 38.3 months (2-96) although five patients could not be reached. No recurrence was detected by imaging methods in 3 of 6 patients with Tg increase during the follow-ups, and they were followed by TSH suppression. Upon the detection of recurrence in 2 patients with scintigraphy and recurrence in 1 patient with both USG and scintigraphy; two patients received additional radioactive iodine ablation after surgery. Complications during surgery were proximal esophageal injury (n=1), Carotid artery injuries (n=1), Jugular vein injury (n=1), pneumothorax and lymphatic duct injury (n=1), and isolated lymphatic duct injury (n=1). Postoperative complications were transient hypocalcemia (n=9), transient unilateral vocal cord paralysis (n=5), permanent hypocalcemia (n=3), bilateral vocal cord paralysis (n=2), and lymphorrhagia (n=2). Tracheostomy was required in patients in whom bilateral vocal cord paralysis developed. There was no perioperative mortality. It was seen that the complications during and after the surgery decreased with increased case volume (p=0,41, P=0,06 respectively). As a result of updates in the guidebooks, prophylactic central ND has been performed only in patients with T3/T4 tumors since 2016.

**Conclusion:** An increasing number of ND has been performed in our clinic by using the intraoperative nerve monitoring and marking resources with gamma probe radionuclide. More complex cases are referred to our clinic and morbidity rate decreases with the increasing experience and technological facilities.

**Keywords:** Differentiated thyroid cancer, Neck dissection, Lymph node metastasis

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## OP-254 [Endocrine Surgery]

### The Effect of Nerve Monitoring on Laryngeal Nerve Injury in Thyroid Surgery

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**Objective:** Recurrent Laryngeal Nerve injury is a rare and important complication and it affects the quality of life when it occurs. The aim of this prospective randomized study was to demonstrate the effect of intraoperative nerve monitoring on reducing the rate of postoperative recurrent laryngeal nerve palsy, on the duration of nerve detection and on the duration of surgery by comparing the patients in whom intraoperative nerve monitoring was used during thyroidectomy and in whom classic visual nerve dissection was performed. It was aimed to present the data obtained by observing the effects of the method on changes in serum calcium and parathormone levels in the study, as well.

**Material and Methods:** Five hundred twenty-seven patients who were included in the study between January 2012 and February 2017 were divided into two groups by randomizing as the group with neuromonitorisation (Group 1; n=241) and the group without neuromonitorisation (Group 2; n=286). Age, gender, postoperative pathology results, surgeries, preoperative and postoperative serum calcium and parathyroid hormone levels, duration of nerve detection, duration of operation, transient and permanent hoarseness and complications were evaluated statistically.

**Results:** There was no statistically significant difference between the group with monitorisation and the group without monitorisation in terms of temporal and permanent hoarseness. Although there was a significant decrease in preoperative and postoperative serum calcium and parathyroid hormone levels of the group without monitorisation, there was no statistically significant difference. A significant decrease was observed in the group with monitorisation when the nerve detection and operation durations were compared between the groups.

**Conclusion:** It has been observed that the use of intraoperative nerve monitorisation accelerates the nerve detection process and shortens the duration of the operation. It has contributed to the prevention of nerve injury although it is not statistically significant.

**Keywords:** Recurrent laryngeal nerve, neuromonitorisation, thyroidectomy, complication

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## OP-255 [Endocrine Surgery]

### The Importance of Atypia of Undetermined Significance

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**Objective:** Thyroid fine needle aspiration biopsy (FNAB) and ultrasonographic features are also indicative in the decision on operation of thyroid nodules in addition to clinical features. The Bethesda system for reporting is widely used for thyroid cytopathology. Although the expected risk of malignancy in the category of atypia of undetermined significance/follicular lesion of undetermined significance (AUS/FLUS) is 5-15%, malignancy is reported at much higher rates in different centers. We aimed to determine the malignancy rates of nodules classified as atypia of undetermined significance (AUS) in FNAB in this study.

**Material and Methods:** The records of patients who were operated for nodular goitre in 2017 were retrospectively examined. Age, gender, ultrasonographic findings, fine needle aspiration biopsy and pathology results of the patients were evaluated.

**Results:** A total of 391 patients, 77 male and 315 female, were examined. The mean age was 47.9 and the mean nodule size was 25.3 cm. FNAB was performed in 224 patients (57%) in the preoperative period. Eighty (35.7%) patients who underwent biopsy were diagnosed with atypia of undetermined significance and 52 patients underwent recurrent biopsy. Second biopsy results were reported as atypia of undetermined significance in 21 patients, non diagnostic in 17, and benign in 9. Postoperative pathology was reported as malignant in 5 of 9 patients reported as benign. The postoperative pathology results of 80 patients diagnosed with AUS in the first biopsy were reported as malignant in 48 (60%) and benign in 32 (40%). Of the malignancies, 27 were papillary microcarcinoma and 21 were papillary carcinomas.

**Conclusion:** The AUS/FLUS category according to the Bethesda classification is a heterogeneous category that does not have sufficient findings for the diagnosis of malignancy or neoplasm, but that cannot be included in the benign group due to its nuclear atypia and structural features. The risk of malignancy is estimated between 5% and 15% in the AUS/FLUS category, and FNAB repetition is recommended. However, the malignancy rates for this category in the literature vary between 5 and 96.7%. In our study, the rate of malignancy for AUS was also found as high as 60% in the first biopsy. The results of the second biopsy recommended did not provide a major help. As a result, AUS/FLUS is associated with a higher risk of malignancy than expected. Surgical intervention can be more effective than the repeated FNAB in an appropriate management of this category. This category may need subgroups, use of auxiliary methods such as molecular and immunohistochemistry or support with clinical and imaging methods to increase its diagnostic effect.

**Keywords:** Atypia of undetermined significance, fine needle aspiration biopsy, thyroid carcinoma

## OP-256 [Endocrine Surgery]

# Is There a Relationship Between TSH Level and the Aggression of Papillary Thyroid Cancer

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**Objective:** Serum concentrations of thyroid stimulating hormone (TSH) are associated with cancer risk in thyroid nodules. TSH suppression in high-risk thyroid cancers positively affects prognosis. However, the association of TSH with prognostic aggressive properties of the tumor at the time of diagnosis is not clear. The data to be obtained in this subject may contribute to the post-operative risk classification and aggressiveness of the treatment. In this study we aimed to evaluate the relationship between papillary thyroid cancer (PTC) aggressive properties and high TSH levels.

**Material and Methods:** Patients who were operated between 2012-2017 and who had PTC in their pathologies were included in the study. Patients with cancers other than PTC, using hyperthyroidism and/or antithyroid drugs were excluded from the study. TSH levels and tumor aggressiveness characteristics (male gender, > 55 years, > 1 cm tumor, T3/T4 tumor, multicentricity, lymphovascular invasion, lymph node metastasis, central metastasis, lateral metastasis) were compared in the study. Quarterly variance was calculated according to TSH (mUI/mL) level and patients were classified as category 1 (TSH<0.68), category 2 (TSH: 0.69-1.43), category 3 (TSH: 1.44-2.35), and category 4 (TSH> 2.45).

**Results:** Of the 133 patients with a mean age of 46.4+13.6 (17-82), 103 were female and 30 were male. TSH levels were significantly higher than those without lymphovascular invasion (2.22+1.63 vs 1.68+1.56, p=0.048) or central metastasis (2.32+1.47 vs 1.71+1.59, p=0.014). When classified according to TSH, the rate of patients in category 1, 2, 3, 4 was 15.2%, 21.2%, 27.3%, 36.4%, 28%, 28%, 22.6%, 21.5%, respectively, in lymphovascular invasion, although there was more than 15% of patients in category 4, no significant difference was found (p=0.222). In the case of central metastases, respectively, in Category 1, 2, 3, 4, the rates of patients were 4.5%, 27.7%, 36.4%, 36.3%; when there was no central metastasis, they were 28.6%, 27.6%, 21%, 22.9%, and 3% in category 3. Although the central metastasis rate was 15.4% in category 3 and 13.44% category 4, the difference was not signifi-

cant ( $p=0.055$ ). No significant difference was found in terms of TSH categories concerning other features. In the multinomial logistic regression analysis, the category 1 was taken as reference group and there was no significant difference when the relative predictive risk rates of the other categories were evaluated according to category 1.

**Conclusion:** TSH levels are higher in the presence of lymphovascular invasion and central lymph node metastasis. Although no significant statistical significance was found, the rates of central metastasis at higher TSH levels were close to the statistical significance limit. This may be related to the limited number of patients. Although no association of TSH with other aggressive properties has been detected in PTC, the increase in TSH may be associated with an increased risk of lymphovascular invasion and central lymph node metastasis. In order to evaluate this, larger studies with higher number of patients are needed.

**Keywords:** Lymphovascular invasion, papillary thyroid cancer, prognosis, central metastasis, TSH

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## OP-257 [Endocrine Surgery]

# Can We Predict Open Bone Syndrome after Minimally Invasive Parathyroidectomy: A Single Center, Prospective Study

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**Objective:** Our aim in this study was to seek answers to the question of whether patients with open bone syndrome after minimally invasive parathyroidectomy (MIP) were predictable with the help of preoperative clinical and laboratory data.

**Material and Methods:** This study was conducted prospectively between January 2016 and December 2017. Patient data were collected after the approval of the ethics committee and recorded in the forms prepared for the study. Patients in whom MIP was administered by a single surgeon were included in the study consecutively. In our study; patients over 75 years of age, patients who had undergone surgery previously in the neck region, patients with ASA IV and chronic renal failure who needed dialysis were excluded. Patients who needed oral  $Ca^{++}$ -D'Vit replacement for a long time at postoperative IV  $Ca^{++}$  application and later were evaluated as ACS. Demographic characteristics of patients, body mass index (BMI), preoperative laboratory values ( $Ca^{++}$ , P+, PTH, TSH, albumin, creatinine, 25-OH vitamin D, ALP, 24 hours urine  $Ca^{++}$ ), bone densities (Radius, L1-4, femoral neck and femor total t scores), adenoma weights,  $Ca^{++}$  and PTH values in postoperative days, hospitalization and IV  $Ca^{++}$  replacement and calcium-vitamin D preparation requirements were reviewed.

**Results:** A total of 73 patients were evaluated in our study. Sixteen (21.9%) of these patients had hypocalcemia ( $Ca^{++}<8.4$  mg/dl) on the 1st postoperative day. Eight (11%) patients had hypocalcemia symptom and examination findings. Of these patients, 6 (8.2%) required intravenous (IV) replacement (min: 2-max: 5, mean: 2.83 days), followed by prolonged oral Ca-Dvit treatment (min 2-max: 6, mean: 3.5 months). These 6 patients were included in the ACS group. The preoperative PTH and ALP values of the patients with ACS group ( $n=6$ ) were found to be significantly higher compared to the other patients ( $m=67$ ), and body mass indexes and Radius t-score measurements were statistically and significantly lower.

**Conclusion:** Primary hyperparathyroidism is a common endocrine disease and over 80% reason is a single adenoma. In patients with a single adenoma, MIP, which is as good as the traditional method of surgery, is advantageous in terms of hospital stay, cost and patient satisfaction when administered by experts. Postoperative hypocalcemia and ACS are a common morbidity following parathyroid surgery and may undermine the advantages of MIP. If patients who are at risk for this condition can be detected before surgery, they can be informed more closely about the symptoms and signs of hypocalcemia and can be monitored more carefully after the operation. Thus, appropriate  $Ca^{++}$ -D vit supplementation in these patients can be started in the early period without symptoms. In the light of the findings of our study, preoperative high PTH and ALP levels, low BMI and Radius t-scores may be helpful parameters in predicting postoperative ACS development in patients undergoing MIP.

However, it is clear that the findings of this single-center and low-volume study should be supported by multicentre large-volume studies.

**Keywords:** Parathyroidectomy, hypocalcemia, hungry bone syndrome

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## OP-258 [General Surgical Diseases]

# Comparison of Modified Karydakis Flap and Limberg Transfusion Flap Techniques in Pilonidal Sinus Disease

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**Objective:** Pilonidal disease (PD) is an infection caused by chronic irritation and secondary inflammation of hair follicles often located in the gluteal cleft. PD is a young adult disease and is rare after 40 years. The incidence is 26-700/100000. It is 2-3 times more common in men. PD usually proceeds with sinus formation and secondary abscesses under the skin, followed by exacerbation and remission. PD may present itself with painful abscess in the acute phase, high fever and reactants elevations; in the chronic period, it may present asymptomatic sinus mouth, spotting in underwear, or chronic pain. In our study, we compared our early and late results with the effects of some factors on morbidity in chronic and non-infected PD patients treated with Modified Karydakias Procedure (MKP) and Modified Limberg Transfusion Flap (MLF) techniques.

**Material and Methods:** We retrospectively reviewed the files of 900 cases of MKP (n=450) and MLF (n=450) who were operated in three different surgical clinics due to the non-infected PD disease between January 2011 and September 2016. Patients who could not be followed were excluded from the study. Demographic data, body mass index (BMI), ASA values, anesthesia patterns, operation findings, early and late surgical complications of the patients were evaluated. In this study, statistical analysis was done by NCSS (Number Cruncher Statistical System) 2007 Statistical Software (Utah, USA) program and the significance was evaluated at  $p < 0.05$  level.

**Results:** The study included 417 patients in the MKP group and 424 patients in the MLF group. There was no statistical difference detected between the groups in terms of age, sex, ASA, BMI, smoking history, abscess drainage period, duration of suture removal, total complication development, postoperative complications such as seroma, hematoma, wound dehiscence, early postoperative pain, late wound injury and recurrence. BMI averages of patients with "once or more than once" abscess drainage in the MKP group were higher than patients with no history of abscess. In the MKP group, the number of days of drainage, the number of days of hospitalization, and the time to return to daily activities of the patient were higher than the MLF group. The rate of infection was higher in obese patients in MKP group ( $p=0.005$ ). This finding was not detected in the MLF group. Recurrence in the MKP group developed in 25 patients (6%) and in 20 patients (4.72%) in the MLF group and no statistically significant difference was found between the groups ( $p 0.338$ ).

**Conclusion:** Although there is no consensus about the treatment of PD, the ideal surgical technique eliminates the disease; also reduces hospitalization time, time to return to normal daily activity, duration of wound care, postoperative pain, wound scarring, risk of recurrence and other morbidities. Our study showed that there was no significant difference in early stage complications in MKP and MLF groups, but longer hospital stay and daily activity in MKP group were longer than MLF group. We think that there is no difference between the groups in terms of late complications, which allows the surgeon to choose the appropriate technique according to the experience and the patient's preference.

**Keywords:** Pilonidal sinus, karydakias, limberg flap, recurrence, body mass index (BMI)

**OP-259 [Surgical Site Infection, Surgical Intensive Care]****Comparison of Mortality Profiles of Benign and Malignant Patients with Nontraumatic Indications in General Surgery Intensive Care Unit****Arif Emre***Department of General Surgery, Kahramanmaraş Sütçü İmam University School of Medicine, Kahramanmaraş, Turkey*

**Objective:** The aim of this study is to determine whether the risk of the development of mortality in general surgery intensive care unit changes due to benign or malignant disease in patients.

**Material and Methods:** The data of the study were obtained by retrospectively examining the records of the patients over 18 years of age who were hospitalized between April 2014 and December 2017. Patients hospitalized with neurosurgical or internal branch indications in intensive care, patients hospitalized due to trauma, and patients transferred to other intensive care units for follow-up and treatment were excluded. Demographic data including age and gender of patients who were operated for other malignant and benign diseases, followed up without operation and mortality after follow-up, number of patients, distribution of comorbid diseases in patients depending on the systems, emergency or elective separation of operated patients, malignant/benign discrimination of pathology which indicate the operation, whether the mechanical ventilation was applied or not, mechanical ventilation duration being longer or shorter than 24 hours, presence of peritonitis and the time between the first admission and the development of mortality were determined and examined. Quantitative data were expressed as mean+standard deviation, median range (min.-max.), and qualitative data with% (n). The variables were examined at 95% confidence level and p value was accepted as less than 0.05.

**Results:** A total of 1944 patients were hospitalized in the intensive care unit and 739 were excluded from the study. Of the 1205 patients included in the study, 63 had mortality and the mortality rate was 5.22%. Of the patients in whom mortality developed,

65.1% were admitted due to benign and 34.9% due to malignant diseases. Of the patients in whom mortality developed, 34.9% were treated urgently, 12.3% were electively operated, and the remaining 50.8% were followed up without surgery. While 12.7% of the patients in whom mortality developed were treated for less than 24 hours, 55.6% of them underwent long-term mechanical ventilation and 31.7% of them did not have mechanical ventilation. While 50.8% of the patients had comorbidity, 49.2% had no additional disease. The mean duration of hospitalization was 13 days. Of patients, 28.6% had peritonitis. It has been observed that the duration of hospitalization, elective operation or non-operative follow-up, whether or not the duration of mechanical ventilation was performed or the presence of peritonitis did not make any difference in the development of mortality between benign and malignant patients ( $p>0.05$ ).

**Conclusion:** In patients with non-traumatic indications in general surgery intensive care unit who have been hospitalized and operated or who have nonoperative follow-up mortality; age, gender, length of stay, comorbidity, presence of peritonitis do not change due to the disease depending on the disease being benign or malignant. The risk of development of emergency or elective surgery, mechanical ventilation and the duration of the application of mechanical ventilation do not change due to the patient's benign or malignant disease.

**Keywords:** Benign disease, surgical intensive care, malignant disease, mortality, profile

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## OP-260 [General Surgery Diseases]

# The Effect of Peritoneal Lavage and Dry Cleansing on Bacterial Translocation in a Model of Peritonitis Induced by Cecal Ligation Puncture

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**Objective:** Today, although the advances in diagnostic methods, surgical techniques, antibiotherapy and intensive care units reduce the mortality of severe secondary peritonitis, mortality is still unacceptably high. The surgeon has a variety of options, such as closure, removal, and resection, to eliminate the source of peritonitis. The application of these methods depends on the surgeon's preference and the patient's condition. The aim of this study is to determine the rates of bacterial translocation by comparing dry cleaning (isotonic wetted gauze=dry cleaning) and isotonic peritoneal lavage method which are among the peritoneal cleaning methods.

**Material and Methods:** A total of 64 rats were studied as sham, control, dry cleaning and isotonic cleaning group. Sham group underwent only laparotomy and control group underwent cecal ligation puncture. The other two groups were treated with ligation puncture and one was dry and the other was isotonic. The samples obtained from the liver, spleen and meso after sacrifice were cultured in aerobic and anaerobic environments.

**Results:** Although there was a significant difference between the dry cleaning and isotonic group in aerobic bacteria measurements in liver, spleen and meso samples, there was no significant difference in anaerobic bacteria. The results of aerobic and anaerobic bacterial translocation from liver, spleen and meso samples are shown in box plot charts.

**Conclusion:** According to our study, in the treatment of intraabdominal infections, the cleaning of the abdomen with the wetted gauze in terms of cleanliness is more effective in terms of aerobic bacteria than the cleanliness done with saline. There is no difference between the two methods in terms of anaerobic bacteria. Therefore, intraoperative dry cleaning in the surgical treatment of intraabdominal infections decreased bacterial translocation rates in terms of duration of stay in surgery clinics, total complication, and drainage requirement, peritoneal lavage group performed with saline, and were observed to give better results.

**Keywords:** Peritoneal lavage, peritonitis, intraabdominal infection

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## OP-261 [Surgical Area Infection, Surgical Intensive Care]

# Evaluation of the Relationship between Neutrophil Lymphocyte Ratio, Mean Platelet Volume, Fournier's Gangrene Severity Score and Mortality in Patients with Fournier's Gangrene



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**Objective:** Fournier's gangrene (FG) was first described by Baurienne in 1764. Fournier Gangrene is a necrotizing fasciitis which affects the external genital, perineal or perianal region, developing and progressing rapidly and can have a mortal course. The purpose of this study was to examine the relationship between retrospective analysis, Neutrophil Lymphocyte Ratio (NLR), Mean Platelet Volume (MPV) and Fournier's Gangrene Severity Score (FGSS) of 23 cases treated due to Fournier's gangrene in our clinic and mortality with the literature.

**Material and Methods:** Patients who were treated due to Fournier's gangrene in our clinic between 2010-2018 were evaluated retrospectively. Twenty eight patients were detected in the examination. Of these patients, 5 of them were excluded from the study because of inadequate records. A total of 23 patients were included in the study. The patients were examined in terms of age, gender, comorbid disease, etiological factor, duration of hospitalization, NLR, MPV, FGSS, number of debridement, need for ostomy, reproduction in culture, complication and mortality. The patients were divided into two groups as those who were discharged (Group 1) and those who resulted in mortality (Group 2) and the comparison results between the groups were examined. Statistical analysis was performed using SPSS 21.0 software.

**Results:** The mean age of the patients was 65.91 ( $\pm 16.34$ ) years. Nineteen (82.6%) of the patients were male and 4 of them (17.4%) were female. Hospital admission times were 3.13 ( $\pm 1.65$ ) days. The most common cause of the disease was perianal abscess (14 patients, 60.9%). The most common comorbid disease was Diabetes Mellitus (DM) (11 patients, 47.8%). *Escherichia coli* was the most frequently isolated pathogen in wound culture (17 patients, 73.9%). Most frequent postoperative complication was pulmonary embolism (6 patients, 66.66%). When the groups were compared, NLR, FGSS, number of debridement and complication rate were significantly higher in Group 2 ( $p < 0.05$ ). In terms of the underlying cause, there was a significant difference between the groups in terms of perianal abscess in Group 1 and in terms of rectal cancer in Group 2 ( $p < 0.05$ ).

When the results were evaluated, it was seen that the majority of the patients' being at advanced age, male gender, developing on the ground of perianal abscess and DM being the comorbid disease was in line with the literature. In our data, when the comparison between the groups was done, it was seen that if the underlying cause was rectum cancer, the mortality rate was higher. Complications during treatment were higher in patients with mortality. However, the number of debridement was found to be significantly higher in patients with mortality, which we think may be used to assess the severity of the disease for the continuation of the treatment. There was no significant difference in MPV rates of the patients between the groups, whereas the NLR values were significantly higher in patients with mortality. Likewise, FGSS rates were significantly higher in this group.

**Conclusion:** We believe that NLO values in addition to FGSS at the time of admission will contribute to the assessment of the severity of the disease.

**Keywords:** Fournier's gangrene, neutrophil lymphocyte ratio, mean platelet volume, fornier's gangrene severity score

**OP-262 [Surgical Area Infection, Surgical Intensive Care]****Evaluation of the Predictive Value of Omentin in Surgical Intensive Care Patients**

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**Objective:** The aim of this study was to determine serum omentin value in patients in the general surgery intensive care unit and to evaluate its usefulness as a prognostic factor.

**Material and Methods:** A total of 428 blood samples were collected for omentin from the 153 patients hospitalized in the general surgery intensive care unit during hospitalization and in new clinical conditions such as sepsis, hemorrhage, infection, mechanical ventilation during intensive care. Prealbumin, procalcitonin, CRP were analyzed simultaneously from the blood taken. When blood samples were taken for APACHE II and every omentin when the patients were hospitalized, SOFA score was calculated and recorded.

**Results:** A total of 153 patients, 82 of whom were male and 71 were female, were included in the study and a total of 428 blood samples were collected from these patients. 19 patients developed mortality in intensive care unit. No significant effect of age on omentin concentration was observed ( $p \geq 0.05$ ). The mean omentin value of the living patients was  $405.15 \pm 351.23$  ng/mL, while the mean omentin level was  $167.37 \pm 199.85$  ng/ml in patients with mortality. The difference of serum omentin value between the living patients and the patients who developed mortality was statistically significant ( $p = 0.001$ ). There was a negative

correlation between CRP, procalcitonin and SOFA score and omentin, whereas positive correlation was found between prealbumin and omentin.

**Conclusion:** Omentin is among adipokines produced dominantly from the stromal-vascular part of the visceral adipose tissue and visceral adipose tissue. Adipose tissue is the most important mediator of inflammation and metabolism. Adipose tissue, especially in the abdomen, is considered as endocrine tissue. Studies related to omentin are limited in the literature. No study could not be found in the literature especially on the availability of omentin as a predictor of mortality. However, omentines have been evaluated in many human and animal studies and it has been shown that omentin has a predictive value in diseases such as mesenterian ischemia, inflammatory bowel disease and coronary artery disease. It has even been reported that it can be used as a cancer marker in some malignancies. However, the role of omentin in inflammation and metabolism and its mechanism of action are not clear. In our study, the value of omentin was examined in patients in General Surgery Intensive Care Unit during hospitalization and in clinical change and it was detected that omentin was statistically different in living and mortality developing patients in intensive care and that it could be used in mortality prediction. In our study, the relationship between the change in clinical status and omentin was also evaluated in intensive care patients. SOFA scoring system was used for this purpose. There was a negative correlation between the increase in SOFA and the level of omentin. At the end of the study, it was thought that the value of omentin could be used in the estimation of mortality and prognosis of intensive care patients. However, we believe that there is a need for a larger and multi-centered and studies with various patient groups including control group.

**Keywords:** Adipokine, omentin, intensive care

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## OP-263 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Intussusception in Adults: Diagnosis and Treatment Approach

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**Objective:** Intussusception is rare in adults. Only 5% of all cases of intussusception are seen in adults and some of them present with intestinal obstruction. Symptoms are nonspecific in adults with intussusception. Preoperative diagnosis is difficult. New studies have focused on preoperative diagnosis and the most appropriate treatment methods. To optimize preoperative diagnosis and surgical treatment in adult intussusception.

**Material and Methods:** Demographic characteristics, diagnosis and treatment approaches and pathological features of 22 patients older than 18 years of age who were diagnosed and treated with intussusception between the years 2011-2018 were evaluated retrospectively. The results were analyzed in the light of literature.

**Results:** Of the 22 cases diagnosed with intussusception, 24.4% of them were operated with acute, 24.4% of them with sub-acute and 51.2% of them were operated with chronic symptoms. Ten of the cases were male and 12 of them were female. 70.7 of the patients presented with intestinal obstruction. There were 8 patients with enteric, 7 patients with ileo-psyhic, 4 patients with colloquonic and 1 patient with sigmoidorectal intussusception. 90% of the cases with intussusception was diagnosed by computed tomography preoperatively. 54.54% of the patients were diagnosed with USG. In patients with palpable mass, the diagnostic values of both CT and USG increased. Lesions could be localized with colonoscopy. Three patients with intussusception could be easily reduced. Resection was performed in 10 patients after primary reduction. No perioperative mortality or anastomotic leak was observed except one patient with multiple small intestine adenomatosis relapsed 6 months after resection. No recurrence was observed in 2 year follow-up of other patients. In the pathological evaluation, 54.3% of the patients with intussusception had a tumor with 27.3% of them was malignant. There were polyps in 9.1% of cases. Intestinal intubation was present after gastrojejunostomy in 2 patients. No organic lesion was observed in 2 cases. Intussusception due to Burkitt lymphoma, which is rare in the literature, was observed. The diagnosis of intussusception is usually made with CT. There is typically a 'Target Sign' finding on CT. Colonoscopy should be performed in patients with the right colon, as in the case of left colon intussusception by telling the risks to the patients (Malignant pathologies-50%). All cases seen in adults should be operated. In addition to all the advantages known with the laparoscopic approach, similar results were obtained in the experienced centers in open surgery oncologically.

**Conclusion:** Computed tomography is the most effective diagnostic tool in intussusception. It can be determined which segment is the lesion located by the help of colonoscopy and its reduction can be provided in benign lesions or in some cases for whom extensive resections are necessary.

**Keywords:** Adult intussusception, diagnosis, treatment, computed tomography, colonoscopy

## OP-264 [Colon and Rectum Surgery]

## The Importance of Number of Lymph Nodes Removed in Colorectal Cancer

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**Objective:** In this study, the experience of our clinic about the importance of the number of lymph nodes removed in the surgical resections performed in our clinic and the number of recurrence/metastases in long-term follow-up was shared.

**Material and Methods:** The data of patients who underwent right hemicolectomy, left hemicolectomy, subtotal colectomy, segmental colon resection, anterior resection, lower anterior resection, abdomino perineal resection and finally total colectomy and ileal pouch were analyzed. In addition to the demographic data, preoperative and postoperative diagnosis, operation timing (emergency, elective), whether there was recurrence or not and its duration, complication rates, number of lymph nodes removed pathologically, metastases and whether neoadjuvant therapy was given or not were investigated retrospectively.

**Results:** A total of 244 patients (M/F=138/106) who underwent surgery in our clinic between November 2013 and December 2017 were retrospectively analyzed. The mean age of the patients was found as 64.8 (46-86) years. When we looked at the location of colorectal cancers, 28 patients had anterior resection due to rectosigmoid region tumor, 65 patients had anterior resection due to rectum tumor, 115 patients had right and left hemicolectomy due to cecum and splenic flexure tumors, 11 patients had subtotal colectomy due to synchronous tumor, and 8 patients had total colectomy and ileal pouch due to FAP/colonic polyps, 14 patients had subtotal colectomy and 3 patients had abdomino-perineal resection due to rectum tumor. The mean follow-up period of the patients was 36 months (3-52). There was no difference between preoperative and postoperative diagnoses. The mean number of lymph nodes removed in the examination of colon meso was 16.7 (11-32) in 70% of the patients. It was seen that 61% (n: 150) of the patients had elective surgery. The mean number of lymph nodes removed in emergency patients was 11.2 (5-20). When the lymph node positivity rate was considered, the mean metastatic lymph node ratio was 18/1 in the elective group and it was found to be as high as 7/1 in emergency cases. A total of 12 patients had recurrence and metastasis at 36 months of follow-up (3-52). Local recurrences were mostly lymph node metastases, and advanced organ metastases were detected in liver and lung.

**Conclusion:** Colorectal cancer surgery is a field that requires a long training and experience and it should not be forgotten that the rates of recurrence would increase and morbidity and mortality rates of the patients would be high in conditions where oncological principles are not followed. As a result of this study, if appropriate lymph node dissection is performed, it is observed that long-term follow-up of patients is satisfactory in terms of recurrence/metastasis. In emergency cases, the fact that optimal conditions are not fully met and this group of patients are usually in advanced stages affects disease-free survival negatively. Therefore, the importance of multidisciplinary approach in oncologic surgery and the application of a standard surgical procedure in both emergency and elective conditions should not be forgotten.

**Keywords:** Colorectal cancer, lymph node, survey, recurrence

## OP-265 [Colon and Rectum Surgery]

## The Effect of Tumor Localization, Microsatellite Instability and Mismatch Repair Deficiency on Colorectal Cancer Prognosis

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**Objective:** Colorectal cancer (CRC) is one of the most common diseases in the world. Major risk factors include the consumption of smoked and/or excessive fiber foods, alcohol, excessive weight, hormone replacement therapies, smoking and long-term non-steroid anti-inflammatory drugs. Recent publications have shown that left and right colon cancers show different clinical and biological features. Although the demographic, hereditary and environmental characteristics of the patients are examined, it is assumed that the exact data for the cause of this condition is unknown, but may be due to the biological behavior of the tumor. CRC is a heterogeneous disease that can occur with different molecular pathological pathways. Chromosomal instability, epigenetic variabilities and DNA mismatch repair (MMR) defect can cause CRC devel-

opment. In addition, microsatellite instability (MSI), which develops as a result of DNA MMR activity, increases the risk of colorectal cancer. However, there is no definitive information about whether or not it is dependent on the localization of the colon. The aim of this study was to investigate the differences between colorectal cancers in different localizations, to reveal the causes of these differences, to investigate whether there is a relationship between MMR and MSI and to evaluate the effects of prognosis and surveillance.

**Material and Methods:** 641 patients who were operated for colon or rectal cancer in the General Surgery Department of our hospital between January 2011 and July 2017, were included in the study. The patients were divided into three groups: those with right-sided tumors (Group 1), patients with left-sided tumors (Group 2) and those with rectum location (Group 3). Patients' files were retrospectively scanned and their demographic data (gender, age), history, preoperative staging scores, tumor localization, treatment principles, lymph node dissection numbers and positivity rates, MMR deficiency or presence, MSI status, hospitalization durations and survival were evaluated.

Pearson Chi-Square, Fisher's Exact test, Mann-Whitney U (distribution not normal), Kolmogorov Smirnov and Shapiro Wilks  $p < 0.05$ ), Chi-square, Kruskal-Wallis, statistical tests and Monte Carlo Simulation-Bonferroni validation method were used.

**Results:** Of 641 patients, 64.9% were male and 35.1% were female. 31.2% of all the cases consisted of Group 1, 45.7% (n=293) of the cases consisted of Group 2 and 23.1% (n=148) of the cases consisted Group 3. Demographic and clinicopathological features of patients. Patients were also classified according to their stages. Accordingly, 10.1% (n=65) of the patients were stage I, 45.7% (n=293) of them were stage II and 44.2% (n=283) of them were stage III. The distribution of the patients according to the stages and the differences between the stages. Localization and phase analysis.

**Conclusion:** According to our study, tumor localization in stage I-III patients has no effect on prognosis. In addition, although there is no statistically significant difference, tumors with MMR deficiency (dMMR) and low microsatellite inactivity (MSI-L) are more common in tumors with right colon.

**Keywords:** Cancer, colorectal, localization, MMR, MSI, survey

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## OP-266 [Colon and Rectal Surgery]

# Comparison of Cleft Lift Procedure and Unilateral Fasciocutaneous V-Y Flap Technique in the Treatment of Recurrent Pilonidal Sinus Disease; Retrospective Clinical Study

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**Objective:** This study aimed to present the results of Cleft Lift procedure and V-Y flap applications in the treatment of recurrent pilonidal sinus disease.

**Material and Methods:** We retrospectively reviewed the data of 121 patients in whom cleft lift flap (CLF) and unilateral fasciocutaneous V-Y flap (VYF) technique were applied for recurrent PSH between September 2010 and May 2016 in Süleyman Demirel University General Surgery Clinic. Seven patients whose information could not be found and 20 patients who could not come to the control examination were excluded from the study. Forty-three patients who underwent FFC and 51 patients who underwent CLF were evaluated. All patients were evaluated for their demographic characteristics (gender, age, BMI), previous operation, duration of symptoms, perioperative complications (seroma, hematoma, wound infection, flap necrosis, wound dissection), duration of operation, duration of drain removal, duration of hospital stay and recurrence rates were examined.

**Results:** The duration of operation was  $35.61 \pm 5.254$  minutes in CLG and  $57.42 \pm 7.327$  minutes in VYFG ( $p = 0.001$ ). Wound separation was observed in 5 patients (9.8%) in CLG and in VYFG, there was no wound separation in any patient ( $p = 0,035$ ) From the point of view of drain removal time,  $1.39 \pm 0.603$  day was found in CLG and  $2.79 \pm 0.638$  days in VYFG ( $p = 0,001$ ). The average time spent in hospital was  $1.75 \pm 0.523$  days in CLG and  $3.77 \pm 1.02$  days in VFN ( $p = 0.001$ ). The mean follow-up period was 46 (min 12, max 72) months in CLG and 44 (min 15, max 72) in VFG. The number of patients with recurrence within these periods was found to be 2 (3.9%) in CLG. No recurrence was observed in VYFG ( $p = 0.189$ ).

**Conclusion:** The advantages of the Cleft method over the V-Y flap method are shorter operating time, less need for drain in patient, and shorter hospital discharge. The fact that the wound separation is more common is the disadvantages. No recurrence was observed in the V-Y flap group in terms of recurrence rates. Cleft is a method with a low recurrence rate (3.9%). Both methods are preferred methods for the treatment of recurrent pilonidal disease because of low complication and recurrence rates.

**Keywords:** V-Y flap, cleft, recurrence, pilonidal, Sinus

## OP-267 [Colon and Rectal Surgery]

## Short Term Results of Laparoscopic Ventral Mesh Rectopexy in Rectal and Complex Pelvic Organ Prolapse; The Largest Turkish Case Series

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**Objective:** Laparoscopic ventral Mesh rectopexy (LVMR) has become more widely used in the treatment of pelvic floor diseases such as external rectal prolapse (ERP), high grade internal rectal prolapse (IRP) and rectocele. LVMR also allows the treatment of pelvic organ prolapse. In this study, the efficacy, safety and short term functional results of LVMR in rectal and complex pelvic organ prolapse in Turkey were examined.

**Material and Methods:** All patients who underwent LVMR between February 2014 and October 2017 were included in the study. Patients were evaluated preoperatively and in the postoperative 3rd month. In terms of the surgical complications and functional outcomes; fecal incontinence was evaluated with Wexner Incontinence Score (WIS) and constipation with Wexner Constipation Score (WCS).

**Results:** Thirty patients (4 males) underwent LVMR. Seventeen patients (56.6%) were found to have complex pelvic organ prolapse according to dynamic-Mr defecography findings. The average duration of operation is 110 minutes and the length of stay in hospital is 4 days. Mesh complication or recurrence has not been observed. Obstructive defecation complaints were found in 21 preoperative patients (70%) and WCS decreased from median 19 to 6 in the 3rd month postoperatively ( $p<0.001$ ). Preoperative WIS was calculated to be median 14, and 9 patients were found to have fallen to 6 in the postoperative 3rd month ( $p=0.008$ ).

In patients with enterocele and sigmoidosis with symptomatic rectocele, WKS after LVMR was also significantly improved ( $p=0.005$ ) and significant improvement was also observed in patients with symptomatic rectocele and accompanying gynecologic organ prolapse; preoperative WKS retreated from median 18 to postoperative 8 ( $p=0.005$ ).

**Conclusion:** LVMR is an effective surgical option for short term follow-ups in Turkish patients.

**Keywords:** Rectal prolapse, pelvic organ prolapse, laparoscopic ventral rectocele

## OP-268 [Colon and Rectal Surgery]

## Comparison of Crystallized Phenol and Microinsectomy Methods in the Treatment of Pilonidal Sinus Disease; a Prospective Study.

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**Objective:** Comparison of the effectiveness of micro sinusectomy method with minimally invasive crystallized phenol application in the treatment of pilonidal sinus disease (PSD).

**Material and Methods:** Two groups were designated as micro sinusectomy group (MSG) (Group 1), the group of hair excision followed by crystallized phenol application (CFG) (Group 2). A total of 152 patients were included in the study, including 76 patients in both groups. All patients in group 1 underwent sinus excision under local anesthesia for the removal of the entire sinus cavity with a 1-2 cm incision in the outpatient setting. All of the patients in group 2 were again dilated slightly under local anesthesia and the hairs inside were removed. Approximately 5 gr of crystallized phenol was injected into the sinus, preserving the surrounding tissue. Dermographic characteristics of all patients, duration of operation, amount of bleeding, analgesic requirement, wound infection, duration of recovery, duration of return to work after treatment and recurrent or unhealed pilonidal sinus disease were recorded. Patients were invited to the control examination on postoperative second, seventh, and twelfth days and 1st and 6th months. At the end of the study, all patients were contacted by telephone and were asked whether they had complaints. The data were analyzed using the SPSS 20.0 program, using the independent samples t and chi square tests.  $P<0.05$  was considered statistically significant.

**Results:** All results are summerized. No statistically significant difference was found between the groups in terms of age, gender, bleeding, wound infection, duration of return to work, and recurrent disease. Mean duration of operation was  $15.63\pm 2.851$  min in MSG and  $9.59.61\pm 2.240$  min in CFG ( $p=0.016$ ). After the procedure, the analgesic requirement of the patient was statistically significant ( $p=0.014$ ), although median value was 1 day in both groups. MSG needed less postoperative analgesic. Recovery

periods were  $12 \pm 2,592$  days in MSG and  $18,59 \pm 4,711$  days in KFG ( $p=0.001$ ). The duration of wound healing in MSG was significantly less.

**Conclusion:** Today, many techniques are used in PSD treatment. In uncomplicated PSD, which is a primary disease, techniques applied with daily anesthesia to outpatients; have become increasingly popular over the last few years due to their low cost, shortening the patient's uptake time and reducing the time to return to work. The most popular of these methods is the application of micro-sinusectomy and crystallized phenol. Although both methods are applicable in the outpatient clinic in a short time, it was observed that the application of phenol was performed in a shorter time in our study. Post-procedural analgesic requirement and duration of healing were less in the group undergoing sinusectomy. When recurrence rates were considered, recurrence was detected in 6 (7.9%) patients in MSG and in 10 (13.2%) patients in phenol group. Both methods are the preferred day-to-day treatments in the outpatient clinic because of their rapid applicability, early return to work and acceptable recurrence rates.

**Keywords:** Microsinusectomy, crystallized phenol, pilonidal sinus, minimally invasive, local anesthesia, prospective.

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## OP-269 [Colon and Rectal Surgery]

# The Effect of Comparison of Pathology Results with Intraoperative Findings of Laparoscopic Appendectomy on Antibiotic Use

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**Objective:** Acute appendicitis is the most common acute abdominal disease requiring surgery. The visualization of intraabdominal disseminated purulent fluid during surgery (non-perforating cases) causes most surgeons to consider it very complicated. Our aim is to demonstrate the necessity of using antibiotics in cases of acute appendicitis except macroscopically seen major complicated cases during surgery.

**Material and Methods:** Five hundred eighty-four patients who underwent laparoscopic appendectomy due to acute appendicitis in the General Surgery Clinic of Necmettin Erbakan University, Meram School of Medicine between the years of 2012-2017 were examined retrospectively. According to the operation records and the findings detected at the time of operation, patients were divided into 2 groups as the patients in whom the therapeutic antibiotic treatment was started postoperatively and those in whom treatment was not started. The groups were compared according to the demographic characteristics of the patients, hospitalization time, gram staining and culture results, surgical site infection, wound infection, intraabdominal abscess development, intraoperative findings and pathology results. Patients with intraoperative macroscopic perforation, plastron, periapendic abscess, immunosuppressive and cancer diagnosis were not included in the study. All patients were treated with cefazolin sodium 1 g prophylaxis preoperatively. In the first group, cefazolin sodium was maintained in the first 24 hours post-operatively after prophylaxis. During the discharge, oral cefazolin sodium+analgesic treatment was given for 5 days. In the second group, no antibiotics were given after prophylaxis. Only oral analgesic treatment was given during discharge. Patients were examined by a physician who did not attend the study conducted at general surgery clinic after discharge. Anamnesis and physical examination were performed for surgical field infection and intraabdominal abscess development. The data were compared statistically.

**Results:** There were 336 (57.5%) patients in the antibiotic group and 248 (42.5%) in the non-antibiotic group. It has been observed that patients treated with antibiotics continue to receive treatment for at least 5 days. According to the results of the pathology, 299 patients with acute suppurative appendicitis and 37 patients with gangrenous appendicitis were reported in the antibiotic group. In the group without antibiotics, 217 were reported as acute suppurative appendicitis and 31 as gangrenous appendicitis. In the group without antibiotics, gram-staining was performed on the purulent liquid samples taken in 112 patients and the results were found to be negative. Trocar site infection was seen in 2 of the patients who received antibiotic treatment and in 1 of those who did not. There were no statistically significant differences between groups in terms of hospitalization, surgical field infection and intraabdominal abscess.

**Conclusion:** Therapeutic antibiotic therapy after appendectomy in acute appendicitis therapy is recommended especially in complicated cases. Especially during laparoscopic surgery, when the appendix is macroscopically evaluated; visualization of perforation or color change means complication. In cases where the appendix is covered with fibrinous exudate during surgery, general suppurative appendicitis is accepted. However, some of them have been found to have gangrenous appendicitis as a pathological result. Purine fluid at the site of dissection during surgery is not a criterion for complicated appendicitis. There is no need to use postoperative therapeutic antibiotics except perforations seen in laparoscopy.

**Keywords:** Acute appendicitis, antibiotic, gangrenous, suppurative

## OP-270 [Breast Diseases and Surgery]

## Factors Affecting Early Complications of Skin Protective Mastectomy in Breast Cancer

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**Objective:** The aim of this study was to investigate factors affecting early wound complications (EC) in patients with breast cancer who underwent Skin Protective Mastectomy and simultaneous implant reconstruction (SPM-IR).

**Material and Methods:** We retrospectively reviewed the data of 60 breast tumors of 55 breast cancer patients who underwent SPM-IR in our clinic between January 2014 and December 2017. EC was defined as wound separation, skin necrosis, and wound infection. Age, smoking, diabetes presence, anticoagulant use, family history, neoadjuvant treatment, tumor location, presence of microcalcifications in mammography, number of breast operations, clinical stage, estrogen and progesterone receptors and CerbB2 receptor and Ki67 status were recorded. The clinicopathologic features of the EC and non-EC breasts were statistically compared using chi-square and ANOVA tests.

**Results:** The mean age of the patients was 45.1 (30-65). There was EC in 18 of all breasts (30%). Wound separation was observed in 10 (16.7%) and necrosis was observed in 8 (13.3%) breasts. Implants were removed from 5 (8.3%) of these breasts. Neoadjuvant therapy (n=7, 11.7%), widespread microcalcifications (n=7, 11.7%), Cerb B2 (-), diabetes (n=3, 5%), anticoagulation (n=16, 33.3%) were significant for early complications ( $p<0.05$ ). The length of hospitalization was significantly higher in patients with EC than in those without EC ( $9.3\pm 4.5$ ,  $5.8\pm 2.3$ ) ( $p<0.001$ ).

**Conclusion:** SPM-IR is a preferred method in Breast cancer to provide better cosmetic results in appropriate patients. However, early complications in these patients are important because they can extend the hospitalization and oncologic medical treatment. In the selection of patients who are scheduled to undergo SPM-IR, we recommend that pre-surgical risk factors identified in our study for early complications should be considered.

**Keywords:** Skin protective mastectomy, complication, mastectomy, breast cancer

## OP-271 [Endocrine Surgery]

## Metaplastic Breast Carcinoma: A Literature Review in Company with a Series of Patients

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**Objective:** Metaplastic breast cancer constitutes about 5% of all breast cancers. Here, it is aimed to investigate the clinical and diagnostic features, surgical and pathologic results of these rare malignancies.

**Material and Methods:** Nine patients who underwent surgery for metaplastic breast cancer between 2010 and 2017 were evaluated retrospectively.

**Results:** Nine female patients with metaplastic breast cancer with an average age of 58.8 were evaluated. The most frequent (100%) symptom was breast mass. One case was diagnosed as metaplastic carcinoma, while the squamous component was detected in 4 cases, the fibrous component in 3 cases and the combined case of spindle and osteoid in 1 case. Diagnoses were made with a tru-cut biopsy. Of patients, 66.6% had common and high grade ductal carcinoma incidence. DCIS was comedo and cribriform types and DCIS was accompanied by atypical columnar cell hyperplasia. Intraductal papilloma was present in 2 patients (22.2%). Lymphovascular invasion was detected in 3 patients and microcalcification was present in 2 patients. In all patients who were scored, the Modified Bloom Richardson score was 8-9. These patients were high grade invasive cancers. One patient had Cerb B2 positive, one patient had progesterone receptor positive, and the remaining 7 patients were triple negative. Chi:67 scores were detected low except for the two patients. Three patients underwent breast conserving surgery, two patients underwent simple mastectomy, one patient underwent subcutaneous mastectomative implant reconstruction and two patients underwent MRM. An 87-year-old patient did not require surgical treatment. A total of 4 patients were treated with axillary dissection, 3 with lymph node positive and 1 without sentinel lymph node. One-three lymph node metastases without extracapsular spread were detected. During the follow-up, local recurrence (skin metastasis) and prosthetic capsule invasion were observed in 1 patient.

**Conclusion:** Metaplastic cancer with squamous, ovarian, osseous or chondroid components can be benign or malignant. Metaplastic carcinomas are also included in TNM classification as infiltrative ductal carcinomas and it is suggested that the treatment should be done on the same principle. This information about pathophysiology, treatment and prognosis is still uncertain. Clinical and radiological examination is not specific. Prognosis is poor due to tumor size and lymph node involvement. It is noteworthy that lymph node involvement is not frequent in our case. Generally triple negative patients should be followed closely after surgery due to high grade DCIS, comedo and cribriform necrosis with atypical columnar hyperplasia and high bloom richardson scores.

**Keywords:** Metaplastic breast carcinoma, diagnosis, treatment

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## OP-272 [Breast Diseases and Surgery]

# Seton Application in the Treatment of Recurrent Non-Puerperal Subareolar Breast Abscess

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**Objective:** The majority of the non-puerperal breast abscesses is in the subareolar region and there is a risk of serious recurrence and fistulization. In this study, the place of application of the seton was investigated in the treatment of subareolar mastitis patients in whom the relationship between the milk ducts and abscesses was revealed.

**Material and Methods:** This study included 17 patients treated with recurrent subareolar breast appendectomy between 2012-2017. Of the patients, 16 were female and 1 was male. The average age is  $35.75 \pm 4.5$ , and all female patients are fertile. The number of affected breast is 22 (5 bilateral). Eleven women were found to have been pregnant one or more times and breastfed for at least six months. Five patients were nulliparous. It has been found out that two of the patients underwent the drainage three times, and another two underwent the same procedure two times; a total of 8 surgeries have been conducted due to breast abscess. Fourteen patients previously had antibiotic treatment due to areola infection.

**Surgical Technique:** Clinically, the abscess was drained by a parallel incision and a seton was applied by revealing the relationship with the milk channel which opened the pouches. Tissue samples were taken for culture and pathological diagnosis from the abscess site. Patients were evaluated at the first, third and sixth months and then every 6 months. If there is a slight flow from the areola, monitoring with seton was continued. In patients with fistulae where the flow was cut, either the seton was removed or the resulting fistula was applied with silver piercing.

**Results:** In the follow-up of the patients; a patient whose seton was removed in the third month (with his/her consent) developed recurrent abscess and applied seton again. Setons of the five patients who completed their twelve months were replaced by silver piercings. In the 18th month three patients' setons were removed. There was no recurrent abscess development in the presented series of patients. While bilateral seton application was continuing in one patient, a bloody discharge came from the areola. Upon the cytological examination of the stream found "suspicious"; bilateral subareolar exploration was performed. Pathology report was declared as "Lobular carcinoma in situ". Simultaneous bilateral mastectomy and breast reconstruction were performed at the patient's discretion.

**Conclusion:** Proving the relationship between breast channels and recurrent subareolar abscess; then applying the drainage before the seton process a) Provides rapid regression of inflammation in the nipple b) Rapid closure of abscess pouch and re-abscess formation c) Seton application can be resolved with silver piercing d) Removal of seton by fistula formation or fistulectomy can be safely applied.

**Keywords:** Nonpuerperal breast abscess, Zuska disease, seton application

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## OP-273 [Breast Diseases and Surgery]

# The Role of 18F-FDG PET/CT in the Detection of Multifocality and Multicentricity in Breast Cancer

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**Objective:** This study was conducted to determine the efficacy of 18F-FDG PET/CT in the detection of multifocality/multicentricity in invasive breast cancer.



**Material and Methods:** The records of 158 female patients who underwent total mastectomy for invasive breast cancer between January 2013 and September 2017 and who underwent 18F-FDG PET/CT prior to the surgery were retrospectively reviewed. Histopathological examination was used as a reference to assess the efficacy of 18F-FDG PET/CT in multifocality/multicentricity detection.

**Results:** Multifocality/multisentricity was detected in 18F-FDG PET/CT in 75 patients (47.5%). Histopathological examination revealed multifocality/multisentricity in 53 patients (33.5%). The sensitivity, specificity, positive predictive value, negative predictive value and overall accuracy of 18F-FDG PET/CT in detecting multifocality/multisentricity were 88.67%, 73.3%, 62.6%, 92.7% and 78.48%, respectively. False negativity and false positivity rates were 11.3% and 26.6%, respectively. In univariate analysis; no relation was found between patient's age, HER2/neu gene amplification, molecular subtype, SUVmax value of the locus, axillary lymph node SUVmax value, axillary length, tumor size, tumor stage, tumor histology, axillary tumor lymph node metastasis, number of metastatic axillary lymph nodes, and the efficacy of 18F-FDG PET/CT in detecting multifocality/multicentricity.

**Conclusion:** 18F-FDG PET/CT has a low rate of false negativity but high false positivity in detecting multifocality/multisentricity in invasive breast cancer. Although 18F-FDG PET/CT seems to be able to make a breast conserving surgery decision in multifocal/multicentric cases, additional tests are needed to determine the mastectomy in multifocal/multicentric cases.

**Keywords:** Breast cancer, multicentricity, multifocality, PET, PET/CT

## OP-274 [Colon and Rectal Surgery]

# Comparison of Laparoscopic and Open Surgical Outcomes in Right Colon Cancers

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**Objective:** Comparison of laparoscopic and open surgical outcomes in right colon cancer patients.

**Material and Methods:** The results of patients who underwent laparoscopic and open surgery due to elective and primary right colon cancer between February 2008 and February 2017 were retrospectively compared. Patients without follow-up information, in whom emergency surgery was performed, who had metastatic disease and were operated due to non-tumor causes were excluded.

**Results:** Of the patients, 31.3% of the patients were operated on laparoscopic and 68.7% were operated through open method. Of the patients, 41% were female. The mean age was found to be 65.4 (range 36-87) for the entire series. There were no significant differences observed in terms of sex, age, ASA score, tumor location, tumor histopathology, number of lymph nodes, neutrophil/lymphocyte ratio, recurrence, metastasis development and survival. The number of patients with T4 tumors was higher in the open surgery group than in the laparoscopic group (6 out of 30). The other T and N phases between the groups were similar. Anastomosis and perioperative death were not observed in the laparoscopic surgery group, but it has been observed in open surgery group in 4 and 2 patients, respectively ( $p>0.05$ ). The rate of re-hospitalization was higher in the open surgery group ( $p=0.005$ ). Average hospital stay was shorter in patients undergoing laparoscopic surgery than open surgery (9,11 patients, 12.05 days,  $p=0.002$ ).

**Conclusion:** Laparoscopic surgery in right colon cancers can be safely applied without compromising oncologic principles. There were no differences in the criteria we evaluated between the two methods except for the duration of the hospital stay.

**Keywords:** Right Colon Cancer, laparoscopic right hemicolectomy, open right hemicolectomy

## OP-275 [Colon and Rectal Surgery]

# Comparison of Histopathologic and Oncologic Outcomes of Laparoscopic and Open Resection of Sigmoid Colon Cancer Patients

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**Objective:** It was seen that the laparoscopic approach in oncologic diseases of the colon could be performed within sufficient safety limits, and it was a superior alternative approach in comparison to open surgery in terms of post-operative pain, cosmetics, shorter duration of hospitalization, and early return to work. In this study, histopathologic results and survival rates of 43 patients who underwent laparoscopic and open anterior resection for sigmoid and rectosigmoid colon cancer diseases were examined.

**Material and Methods:** From July 2015 to March 2018, 43 patients underwent laparoscopic colon resection for sigmoid and rectosigmoid colon cancer diseases. Demographic characteristics of patients, T/N staging, number of benign/malignant lymph nodes, histopathological findings and follow-up durations were evaluated.

**Results:** Seventeen of 43 patients had open anterior resection (39,53%); 26 had a laparoscopic anterior/low anterior resection (60,47%). Fourteen patients were female and 29 patients were male. The tumors occurred as sigmoid colon in 30 patients (69.7%) and as rectosigmoid colon in 13 patients (30.3%). Number of stage 1 patients in open/laparoscopic groups; 3 (17.6%)/5 (19.2%) were stage 2; 8 (47,1%)/11 (42.3%) were stage 3; 6 (35.3%)/10 (38.5%) were ??, respectively ( $p=0,722$ ). The number of lymph nodes removed was 10-31 (20,9)/7-36 (19,46) in open/laparoscopic groups, respectively ( $p=0.539$ ). The numbers of malignant lymph nodes were 0-4 (1,00)/9 (34,6%) in open/laparoscopic groups, respectively ( $p=0.184$ ). Survival life span was 3 (17.6%)/13 (50.0%) months for 0-12 months, 11 (64.7%)/11 (42.3%) for 13-24 months in open/laparoscopic groups, and 3 (17.6%)/2 (7.7%) months for 25-36 months, respectively ( $p=0.092$ ). Age, total lymph nodes, malignant lymph nodes, t-test for distal margins and radial margins, Chi square test for other variables were calculated in the SPSS 20 statistical program.

**Conclusion:** It is believed that laparoscopic intervention is an appropriate intervention in experienced hands to ensure the integrity and continuity required for colon surgery principles, infection control, minimizing bleeding and pain, minimizing incisions, preventing short and long-term complications, and maximizing patient benefit. Studies have shown that laparoscopic method gives better results than open surgery in terms of early nutrition, postoperative pain, patient comfort, length of stay in the hospital and cosmetics. In patients with colorectal cancer who underwent laparoscopic or open surgery, there was no significant difference in histopathological findings, recurrence, distant metastatic disease and disease free survival. As shown in our study, there were no significant differences between the groups in terms of the final stages, number of lymph nodes removed, number of malign lymph nodes, distal/peripheral margins, and laparoscopic surgery.

**Keywords:** Colon tumors, laparoscopic surgery, histopathology

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## OP-276 [Colon and Rectal Surgery]

# Effect of Subcutaneous Washing on Surgical Field infection after Colorectal Surgery

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**Objective:** Skin mechanic cleaning with sterile water is being investigated for protection against surgical site infection (SSI) in patients undergoing colorectal surgery.

**Material and Methods:** The files of patients undergoing colorectal surgery by the same surgical team in 2012-2017 were retrospectively reviewed. Patients' demographic data, accompanying diseases, ASA scores, surgeries and the parameters effective on SSI development (smoking, malnutrition, immunosuppressive drug use, neoadjuvant chemotherapy history, preoperative hospitalization, preoperative blood transfusion, emergency surgery status, contamination grade, stoma opening status) were digitally recorded. Patients over the age of 18 years who underwent colorectal surgery abdominally were included in the study. Laparoscopic cases were not included in the study. Statistics were realized with JMP 4.02 analysis software program. Categorical variables were compared using Fisher's exact test or chi-square test and summarized as "frequency (%)". Quantitative variables were compared with the Wilcoxon rank-sum test and the median and interquartile range or mean±standard deviation was shown unless otherwise stated.  $P<0.05$  was considered significant.

**Results:** Of the 891 patients included in the study within 7 years, 36.6% (326 patients) were female, 63.4% (525 patients) were male, and the mean age was  $58.8\pm 14.3$ . Median BMI was 27 (18-45) and median ASA was 2 (1-4). Of the surgeries, 15,2% were urgent. Of the patients, 67% were operated for malignancy. SSI ratio was 3,9%. Of SSI patients, 57% had superficial, 20% had deep, and 23% had organ cavity infections. BMI ( $p=0,23$ ), diabetes mellitus ( $p=0,84$ ), smoking ( $p=1$ ), COPD ( $p=1$ ), malnutrition ( $p=0,64$ ), immunosuppressive drug use ( $p=0,71$ ), neoadjuvant chemotherapy ( $p=0.18$ ), preoperative hospitalization ( $p=0.12$ ), blood transfusion ( $p=0.14$ ), emergency surgery status ( $p=0.22$ ), mechanical bowel obstruction  $p=0.74$ ) and stoma opening rate in the operation ( $p=0.6$ ) between SSI group and non-SSI group were similar.

**Conclusion:** SSI after colorectal surgery is reported between 2% and 14%. Emergency surgery, mechanical obstruction and immunosuppression can increase this rate even more. There are publications showing that the untouched subskin mechanical cleaning with polyvinylidene-iodine and disinfectant at the end of the operation reduces the SSI ratio. In our study which the

risk factors in the development of SSI are similar in patients with and without wound infection; easy to access, cost-effective, mechanical subcutaneous wash with sterile water is an effective way to prevent the development of SSI.

**Keywords:** Sterile water, subcutaneous washing, surgical field infection

## OP-277 [Colon and Rectal Surgery]

# Will Perianal Fistulas Stop Being a Nightmare? Topical Silver Nitrate Application for Perianal Fistula

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**Objective:** Anal fistula is a common condition after septic events of the anorectal region. Recurrence of fistula, poor quality of life, repeated surgery and consequent deterioration of continence have shown that surgical treatment is not always curative. Can we treat anal fistulas with non-invasive procedures to minimize the post-surgical problems? In our study, we evaluated the success rate of treatment of our anal fistula tract washed with 20% silver nitrate solution (SNS) to find the answer to this question.

**Material and Methods:** Forty-nine patients who were admitted to our outpatient clinic between January 2017 and January 2018 due to intersphincteric and transsphincteric anal fistulas were included in the study. The application consists of irrigation of the fistula tract with GNS after debridement with the aid of a brush in outpatient clinic conditions. A maximum of 6 sessions with a one-month interval with at least 1 session depending on the recovery status of the disease has been performed.

**Results:** Forty-nine patients were included in the study. The male/female ratio was 5 (10.20%)/44 (89.80%). The rates of interspecific and transsphincteric fistulas were 42% and 58%. An average of 3 (1-6) sessions were performed for each patient in the GNS. The mean follow-up period was 7 months (3-12). We grouped treatment outcomes as adequate healing (complete+serous discharge) and inadequate healing. The finding of the serous discharge in the adequate healing group is in the form of slight pollution after serous discharge over time. This patient group continues to be followed up. The inadequate healing group consists of the patients who are operated or who have purulent discharge. As for the number and proportions of patients according to groups; complete healing, serous fluid healing and inadequate healing rates were 18 (36.73%), 15 (30.61%) and 16 (32.65%), respectively.

**Conclusion:** In our study, we found that more than half of the patients had adequate clinical recovery after washing with 20% SNS. Moreover, with only one application, it was observed that the fistula tract was closed in a small group of patients. Complete clinical improvement was observed in one third of the patients after one or more repeated washes in all of the patients with fistulae. The median duration of completing the clinical healing was 12 weeks. Sixteen patients (32.6%) were shown to have clinical failure for recovery. This prospective study is one of several studies showing the utility of SNS administration in the treatment of anorectal fistulas. This procedure is not invasive, lacks the complications of conventional treatment modalities and offers an opportunity for outpatient treatment. In addition, it is known that after the classical treatments of anal fistulas, secondary pathways and persistence of blind regions are the main cause of recurrence. For this reason, another effect of this method is that since the silver nitrate solution is liquid, it may flow to secondary pathways in horse shoe fistulas, possibly reducing recurrence rates.

**Keywords:** Perianal fistula, treatment, silver nitrate solution

## OP-278 [Colon and Rectal Surgery]

# The Importance of Anorectal Physiology Tests in Clinical Diagnosis and Treatment

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**Objective:** Despite the innovations in the diagnosis and treatment of pelvic floor diseases and anal incontinence in recent years, they still continue to be socioeconomic and medical problems in the world and in our country. Especially the anorectal physiology tests increasing in frequency of use at the time of diagnosis are becoming increasingly effective in the treatment process. In particular, the use of anorectal physiological tests has made it possible to better understand the

disease; it is easier to decide which procedures to choose for the patients of surgical restoration. In our study, we aimed to determine how anorectal physiology tests affect the diagnosis and treatment of patients who turn subjective findings into objective ones.

**Material and Methods:** The study included 240 patients who were admitted to the proctology unit between January 2015 and August 2017. Patients were divided into 3 groups according to the admission complaints: Group 1: Obstructive defecation syndrome (ODS) Group 2: Control after anal incontinence preoperative and sphincter repair; Group 3: Anal incontinence. Group 2 and Group 3 were subdivided into subgroups. Demographic data and admission complaints of patients were retrospectively reviewed from the file and electronic records. Clinical histories of the patients were examined: Appropriate indications for performing the necessary anorectal physiologic tests were determined with Systemic Disease, Proctologic Disease Story, Previous Proctologic Surgery, and Current Physical Examination. The number of application of anorectal physiological tests in the groups was checked. Surgical treatment or medical care orientation rates of patients were examined.

**Results:** Our study included 240 patients. The mean age distribution of the patients was  $43,8 \pm 19,1$  in group 1,  $42,1 \pm 17,1$  in group 2, and  $46,2 \pm 17,8$  in group 3 ( $p:0,356$ ). Of the patients who were included in the study, 43.3% were women. Considering the ratios of anorectal physiology tests performed in these groups; anorectal manometry in n:38 100% performed in group 1, Endoanal usg in n:5 13,2% performed, in n:33 86,8% not performed; Defecography in n:18 47,4% performed, in n:2 52,6% not performed; EMG in n:1 2,6% performed, in n:37 97,4% not performed; Anorectal manometry in Group 2 in n:48 100% performed, Endoanal usg in n:20 42,6% performed, in n:27 57,4% not performed, Defecography in n:3 6,3% performed, in n:45 93,8% not performed; EMG in n:0 0% performed, in n:48 100% not performed; in Group 3, Anorectal manometry in n:154 100% performed, Endoanal usg in n:49 31,8% performed, in n:105 68,2% not performed; Defecography in n:10 6,5% performed, in n:144 93,5% not performed; EMG in n:39 25,3% performed, in n:115 74,7% not performed. The effect of the tests performed on surgical decision was evaluated with various parameters.

**Conclusion:** Anorectal physiologic tests are important for accurate diagnosis and planning of treatment, especially due to the multiple factors that cause pelvic floor diseases and anal incontinence and coexistence of multiple diseases. Since different pathophysiological mechanisms are influential, it is important to identify which pathology exists. The combined use of anorectal physiological tests in anal incontinence groups increased the rate of referral to surgical treatment.

**Keywords:** Anorectal physiology tests, anal manometry, endoanal usg, pelvic floor, anal incontinence

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## OP-279 [Colon and Rectal Surgery]

# Clinical and Pathological Effects of Mucinous Adenocarcinoma in Colorectal Cancer Patients

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**Objective:** In colorectal cancers, histologic subtype tumors are thought to play a role in prognosis in addition to grade and stage. Studies have shown that mucinous adenocarcinomas appear at younger ages and more advanced stages in comparison to classic adenocarcinomas. In this study, the effect of the presence of mucinous cancer on pathological and clinical findings in patients operated due to colorectal cancer was investigated.

**Material and Methods:** Four hundred and eighty-four patients who underwent surgery between 2010 and 2017 due to colorectal cancer were included in the study. Patients were divided into two groups according to the presence of mucinous component as "Classical Adenocancer (CAC) (No Mucinous component or <50%)" and "Mucinous Adenocancer (MAC) (Mucinoase component 50%)". Clinical, pathological, and operative findings of the patients were evaluated retrospectively.

**Results:** Of the 484 patients with an average age of  $67.8 \pm 12.9$ , 69 (14.3%) were found to have MAC and 415 (85.7%) were found to have CAC. The mean age of the MAC patients was 63.4, while that of the CAC patients' was 68.5 ( $p:0.002$ ). When the preoperative CA 19-9 levels of the patients were examined, an increase was found in 23.4% of MACs and 9.3% of CACs ( $p:0.006$ ). Right colon involvement was found in 30 (43.5%) of the MACs and 123 (29.6%) of the CACs in view of the tumor localization ( $p:0.029$ ). Both the mean number of metastatic lymph nodes (3.57 vs. 1.84) and the presence of metastatic lymph nodes (57.9 vs. 41.2%) were found higher in the MAC group ( $p<0.01$ ).

**Conclusion:** In this study, it was determined that mucinous adenocancer spreads more lymphatically, emerges at younger ages, involves more of the right colon and has a significant increase in serum CA levels of 19-9.

**Keywords:** Colorectal cancer, mucinous cancer, lymphatic metastasis

## OP-280 [Wound, Wound Care and Burn]

# The Importance of the Restructuring of Diabetic Foot Clinics in Turkey

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**Objective:** In parallel with the increase in the prevalence of diabetes in our country, the incidence of diabetic foot is also increasing. Considering that 60% of nontraumatic lower extremity amputations are diabetic, management of this important complication also requires attention. In this study, the importance of establishing diabetic foot treatment units is emphasized by sharing the data of our patients who are followed up and treated in our clinic, which is one of only four centers that have full capacity of diabetic foot ulcer disease in our country.

**Material and Methods:** The data of 382 patients who underwent inpatient treatment between March 2016 and February 2018 in the Diabetic Foot clinic of Hitit University Çorum Training and Research Hospital were examined retrospectively. Patients' demographic data, additional diseases, diabetes types and stories, three-dimensional measurements of the foot wounds, localizations, stages, applied treatment modalities, wound healing processes, wound closure methods, and the durations of hospitalization and follow-up were noted.

**Results:** Of the patients, 265 were male, 117 were female and the mean age was 64. While 225 patients (58.9%) received insulin, 68 patients (17.8%) received oral antidiabetic drug and 78 patients (20.4%) received both insulin and oral antidiabetic drug; 11 patients (2.9%) did not receive any treatment for diabetes and diabetes diagnosis was made when they were admitted with diabetic foot wound complaint. Mean diabetes duration was 13.7 years, mean duration of diabetic foot was 300.5 days (2-8760 days). One hundred and sixteen patients were evaluated as Wagner stage 2, 219 patients as Wagner 3, 38 patients (9.9%) as Wagner 4 and 9 patients (2.4%) as Wagner stage 5. There was growth in tissue culture in 252 patients (66%). Mean duration of hospital stay was observed as 26.3 days. Conventional dressing was applied in 210 patients (55%), debridement and conventional dressing in 60 patients (15.7%), amputation and dressing at various levels in 20 patients (5.2%), amputation and debridement plus NPWT in 14 patients (3.7%), amputation in 10 patients (2.6%), debridement+NPWT in 8 patients (2.1%), abscess drainage in 5 patients (1.3%), and NPWT was performed in 2 patients (0.5%). Thirteen patients (3.4%) received graft after NPWT, 11 patients (2.9%) received conventional dressing graft, 3 patients (0.8%) received dressing+graft+NPWT, and 1 patient (0.3%) received flap reconstruction. In the first evaluation of hospitalization, it was observed that fewer amputations were applied compared to the number of patients for whom amputation was anticipated and that amputation types applied were more distal than the predicted ones.

**Conclusion:** Diabetic foot ulcer, which is one of the most difficult complications of diabetes, is quite common. One of the main problems of patients who are already faced with a very challenging treatment process is the difficulty in reaching caregivers and health professionals. We believe that the creation of more units specializing in diabetic foot, providing careful training to health professionals and improving working conditions are essential.

**Keywords:** Diabetes, diabetic foot, structuring

## OP-281 [Wound, Wound Care and Burn]

# Where are the General Surgeons in the Management of Diabetic Foot?

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**Objective:** Diabetic foot ulcer therapy is a long-lasting process and is a distressing process for health-care workers, who serve with self-sacrifice in the most demanding treatment process as patients suffer from this disease. Either the difficult healing process due to the nature of the disease, or the long hospital stay period cripples the cure adaptation process and causes setbacks in the documentation of the patients. In this study, it was aimed to examine and emphasize the importance of sharing the devoted works of general surgeons located in the center of diabetic foot treatment in the scientific setting.

**Material and Methods:** Using the key words 'diabetic foot' and 'Turkey' through Internet search engines, published studies which are able to take place in scientific platforms like PubMed were examined. Each study was examined in detail and pointed

out the year, the institution from which it is published, the type of the institution, the city where it is located, whether other publications are made from the same institution, whether the work is done by one branch or multidisciplinary have been recorded.

**Results:** When the keywords 'Diabetic foot' and 'Turkey' were searched in Pubmed, it has been seen that there are 199 scientific studies published between January 1996 and December 2017. When publications were scanned in detail, it was found out that 163 studies were conducted in Turkey by Turkish physicians. It was seen that 163 studies were published from 62 different institutions in 30 different cities; 81.2% of the institutions were universities, and 12.3% were training and research hospitals. Of the studies, 88.3% were monocentric, 11.7% were multicentric. Of the 24 studies performed by different branches, 73.6% were made by one branch and 26.4% were the products of multidisciplinary study. While 78.5% of the studies were clinical studies, 6.1% were animal studies and the remaining 15.3% were reviews. Of clinical trials, 25% were case reports. There were only 2 studies published by general surgery, whereas the branches like infectious diseases, plastic surgery, orthopedics and hyperbaric and underwater physicians from 24 different other branches have been seen to share their work on the scientific platform.

**Conclusion:** In the management of such a disease like diabetic foot which requires a hard and long process of healing; general surgeons who are always in the center and have not been able to convert these labor into scientific products are an indication that they can not collect the academically fruitfulness while lifting the burden. In this sense, we think that general surgery units should take a more active role and take a leading role in the scientific platform.

**Keywords:** Diabetic foot, PubMed, Turkey

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## OP-282 [Wound, Wound Care and Burn]

# The Effect of Intralesional Epidermal Growth Factor Treatment on Wound Healing in Foot Ulcers Associated with Peripheral Artery Disease and Diabetes

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**Objective:** There are studies in the literature that demonstrate the positive effects of intralesional epidermal growth factor treatment on the treatment of diabetic foot ulcer. Growth factors are known to contribute positively to the healing process by increasing fibroblast functions and protein synthesis at wound healing. In this presentation, we aimed to share the results of wound healing of this treatment used in foot ulcers arising from peripheral artery disease and diabetes mellitus.

**Material and Methods:** We performed intralesional epidermal growth factor treatment for 29 foot ulcers resulting from peripheral artery disease and diabetes coexistence of 17 patients who could not be treated by conventional wound treatments between March 2013 and November 2017 in order to protect the extremity from major amputation. Of the patients, 67.7 (44-84) were male and 23.5% were female; the mean age was 76.4%. The most common accompanying diseases were 88.2% hypertension, 76.4% coronary artery disease and 35.2% chronic kidney disease. Intralesional growth factor was applied to a total of 29 feet of ulcers in 17 treated patients. Foot ulcers were in the order of finger amputation instability (44.8%), foot base (20.6%) and forefoot amputation instability (17.2%), respectively. After the foot ulcers were surgically debrided and washed with saline, 75 µg of EGF diluted in 5 ml of saline was applied to the wound and into the wound 3 times a week. Because of the development of anaphylaxis in one patient and minor side effects in three patients, drug administration was terminated in these patients. The duration of treatment ranged from 9 to 36 days, with an average of 23.7 days. The injuries were assessed according to the Wagner criteria.

**Results:** This treatment resulted in a total success rate of 65.6%. Initially, according to the Wagner stage, 4 foot ulcers were considered as stage I, 14 as stage 2, and 11 as stage 3. After treatment, full healing was observed in 4 (13.7%) foot ulcers with Wagner stage 1. In 9 foot ulcers (31%) of Wagner's stage 2, adequate granulation was achieved at the wound site, and it was observed that the wound stage decreased to stage 1 at the end of treatment. Of the 6 foot ulcers with Wagner's stage 3, 3 retreated to stage 2 (10.3%) and the remaining 3 to stage 1 (10.3%). In 10 foot ulcers (34.4%) with Wagner 2 and 3, the desired success in wound healing was not achieved.

**Conclusion:** According to this study, intralesional growth factor administration has positive results in foot ulcers due to peripheral arterial disease ranging from 1 to 3 in Wagner's staging. Promising results can be obtained by protecting the extremity from major amputation by application of intralesional growth factor in patients with peripheral arterial disease whose vascular intervention methods are not appropriate and have foot ulcers that do not heal with conventional wound care treatments. This treatment method whose initial results we report in patients with peripheral arterial disease will lead to comprehensive studies with more patients.

**Keywords:** Growth factor, peripheral arterial disease, diabetic foot ulcer

## OP-283 [Wound, Wound Care and Burn]

## Recovering Burn Stasis Zone in Rats with Pentoxifylline and Milrinone

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**Objective:** The aim of this study is to investigate the effects of pentoxifylline and milrinone on the stasis zone of the rats with the experimental burn model.

**Material and Methods:** In the study which is experimental design; following the application of 5-phosphodiesterase inhibitors the pentoxifylline and the milrinone orally and intraperitoneally, the effects of these agents on stasis zone and the comparison of the effects were studied. In the study, 56 female 4-month-old female Wistar Albino weighing 200±10 gr were used. The rats were divided into 7 groups. Under anesthesia, forty-eight rats were subjected to the burn pattern defined by Regas and Erlich. Group 1 sham group, Group 2 intraperitoneal control group and Group 3 was determined as oral control group. Group 4 received pentoxifylline intraperitoneally daily at a dose of 50 mg/kg, Group 5 received pentoxifylline orally daily at a dose of 50 mg/kg, Group 6 received milrinone 1 mg/kg intraperitoneally daily and Group 7 received milrinone 1 mg/kg orally for 10 days. All rats were sacrificed on the 10th day of the experiment. Serum samples for the biochemical levels of malondialdehyde (MDA), glutathionoperoxidase (GPx), superoxide dismutase (SOD) and catalase; tissue samples for histopathologic study were taken.

**Results:** Edema, hyperemia, epithelial degeneration, necrosis, inflammatory filtration and fibrosis measurements were done pathologically. Compared with the control group, the tissue damage score was lower in all the treated groups. MDA levels were lower in the intraperitoneal and oral pentoxifyllin groups than in the control group, while SOD, catalase and GPx levels were found to be high. MDA levels in the intraperitoneal and oral milrinone group were lower than those in the control group, and SOD, catalase and GPx levels were higher. In addition, MDA levels in intraperitoneal pentoxifyllin group were higher than that in intraperitoneal milrinone treated group, whereas SOD, catalase and GPx levels were higher than intraperitoneal milrinone treated group. In oral pentoxifyllin group, MDA levels were lower than oral milrinone group and SOD, catalase and GPx levels were higher than oral milrinone group.

**Conclusion:** The results of our study showed that pentoxifylline and milrinone reduce oxidative stress and have positive effects on wound healing in the experimental burn model created in rats. It has been determined that oral and intraperitoneal pentoxifylline administration on wound healing is superior to oral and intraperitoneal administration of milrinone in the experimental burn model developed in rats. In order to use oral and intraperitoneal pentoxifylline as a wound care product, new researches on its effects to stasis zone, the most effective cure dosage, side effects and the duration of treatment; considering it as an active clinical molecule to put in use and prospective randomized clinical trials are strongly recommended.

**Keywords:** Burn, stasis zone, 5-phosphodiesterase inhibitor, pentoxifylline, milrinone

## OP-285 [Obesity]

## Bleeding Complication after Laparoscopic Sleeve Gastrectomy; Single Surgeon Experience, 2 Years, 841 Case Series

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**Objective:** Laparoscopic sleeve gastrectomy (LSG) is one of the most commonly performed bariatric procedures. Bleeding is one of the early postoperative complications that should be identified urgently following LSG. Perioperative bleeding complications are not common, but may require surgery in some cases. Correct detection of postoperative risk factors and close follow-up of vital parameters determine the surgical decision making process and may reduce the risk of reoperation. The purpose of this study is to determine the frequency of bleeding after LSG and to reveal the cause and treatment of bleeding.

**Material and Methods:** A retrospective analysis of 841 patients who underwent LSG within two years from January 2016 to December 2017 by a single surgeon who has been involved in obesity and metabolic surgery for 10 years was made. The mean age of the patients was 42.0 (±11.6) years and the mean BMI was 41.5 (±7.3) kg/m<sup>2</sup>. Ethicon-brand staplers were used for resection in routine operations, and only Tissel tissue adhesive was used for incision line support. Intraoperative punch line bleeds were under endoscopic clip control.

**Results:** Postoperative bleeding complication rate was determined as 1%. There were no bleeding complications intraoperatively. Three patients had postoperative blood transfusion and right after a follow up control bleeding complications detected. These three patients were given low molecular weight heparin and blood pressure was high. Five other patients underwent diagnostic laparoscopy due to bleeding (one patient on postoperative day 1, three patients on third, and one patient on fourth day). Hemorrhage was stopped in two patients and hemorrhage area could not be detected. In one case, bleeding was detected from the right trocar entrance site and bleeding from the open vessel site in the stapler line in the other two patients. Hematomas were cleared after bleeding control. Hypertension was present in three of the operated patients. All patients were discharged without problems.

**Conclusion:** Our study revealed the association between haemorrhagic complications and hypertension and the use of anticoagulants, the experience of the surgeon, and clipping, if necessary, on the stapler line. In conclusion, by doing the risk assessment for post-LSG hemorrhagic complications in advance; procedures such as close follow-up of drainage and vital signs, blood pressure control and time to use anticoagulant and complications of bleeding can be successfully managed.

**Keywords:** Sleeve gastrectomy, postop bleeding, bleeding control

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## OP-286 [Obesity]

# Is Methylene Blue Test Required During Laparoscopic Sleeve Gastrectomy?

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**Objective:** Bariatric surgical interventions are among the most frequently performed surgical interventions in recent years. Although there are different types of procedures, sleeve gastrectomy is the most frequently performed surgery both in the world and in Turkey. Sleeve gastrectomy is performed worldwide for more than 15 years, yet some standards have not been decided. One example is that of the tests made to investigate the presence of a leak on the stapler line. There is no standard approach to the need for testing for leak investigation, what type of testing should be done and when it should be done. In this study, we investigated the efficacy of peroperative methylene blue test to investigate the presence of leaks in our clinic.

**Material and Methods:** Patients who were operated on due to morbid obesity in the general surgery clinic of Antalya education and research hospital were included in the study. Patient and operative information, postoperative follow-up and complication information were recorded by retrospective evaluation of patient files. The patients were divided into two groups as leak tested with methylated blue (group 1) and not tested (group 2). Both groups were treated by the same general surgical specialist with the same surgical technique as sleeve gastrectomy. Pylorus was closed laparoscopically with a clamp in patients undergoing the methylene blue test. It was observed that the striatum was swollen with about 60 cc methylene blue given through the orogastric tube. Presence of a leak in stapler line was investigated. In cases where leakage was not observed, methylene blue was aspirated and orogastric tube removed. None of the patients were scanned with scopy or CT for leakage in postoperative period. All results were uploaded to the SPSS program and statistics were analyzed.

**Results:** 110 patients who were consecutively administered the methylene blue test and 110 patients who were not applied were included in the study. Group 1 and Group 2 had 88 females and 22 males. The mean age of the patients was 39.4 in group 1 and 42.9 in group 2. Perop leakage was not observed in any of the patients who underwent methylene blue test. During the follow-up period, 2 of all patients experienced leakage. In Group 1, leakage was observed on postoperative day 5; whereas in Group 2, leakage was observed on postoperative day 40. Both patients suffered the leakage in the fundus region. The leakage rate (0.9%) was similar in both groups. The mean duration of operation was 63.7 min (44-108) in group 1 and 54.2 min (31-135) in group 2 when the patients who underwent the additional surgeries such as cholecystectomy and CRU repair were excluded.

**Conclusion:** In many studies on sleeve gastrectomy, tests for detecting leaks have been evaluated, but none of them have been reported to be of any benefit. In our study, although peroperative leakage was not observed in any of the patients who had methylene blue, it was observed that leakage was there later in the postoperative period. According to the results of this study, we think that methylene blue test may not be applied.

**Keywords:** Laparoscopic sleeve gastrectomy, leak test, bariatric surgery

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## OP-287 [Obesity]

# The Effect of Protein Support after Sleeve Gastrectomy on Weight Loss, Sarcopenia and Life Quality Index



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**Objective:** Sarcopenia refers to the progressive generalized loss of muscle mass and muscle force. Laparoscopic Sleeve Gastrectomy (LSG) is the most common surgical procedure for the treatment of morbid obesity. In the early postoperative period, protein deficiency due to decreased oral intake and loss of muscle mass are seen frequently. In our study, we aimed to determine the effects of standard protein supplementation on sarcopenia and quality of life in the early postoperative period.

**Material and Methods:** Sixty-eight patients were included in the study. The patients were randomly divided into two groups (Control and Protein Support Group). Protein support group received 80 gr/day protein support for the first month after surgery. Anthropometric measurements, bioelectrical impedance analysis (BIA), SF 36 test, and ultrasound thickness measurements of gastrocnemius muscle and erector spina muscles were performed at 1 month before and after surgery. BIA and SF 36 measurements were repeated in the 3rd and 6th months.

**Results:** There was no difference between groups in terms of age and gender ( $p > 0.05$ ). No difference was observed between the groups in terms of weight loss in the 1st, 3rd and 6th month controls ( $p > 0.05$ ). Fat-free body weight was significantly lower in the protein support group than in the control group ( $p < 0.05$ ), but there was no difference with the control group at the 6th month ( $p = 0.3$ ).

There was no significant difference in ultrasonographic muscle thickness measurements at baseline and at 1st month when protein support and control group were compared ( $p > 0.05$ ). However; it was determined that muscle loss would decrease due to protein support. Physical role difficulty and emotional role difficulty scores were significantly higher in the protein support group at the 6th month than the control group in SF 36 subgroups ( $p < 0.05$ ).

**Conclusion:** In our study, for the first time in the literature, ultrasonography was used to determine muscle mass change in bariatric surgery patients and correlated with indirect measurements such as bioimpedance electrical analysis. 80 g/day protein support in the early period after LSG preserves muscle mass without affecting weight loss and improves quality of life in the medium term. New studies are needed on the content, amount and replacement time of the protein support product to be selected.

**Keywords:** Morbid obesity, laparoscopic sleeve gastrectomy, sarcopenia, lean body mass, protein support, quality of life

## OP-288 [Obesity]

# Pregnancy after Laparoscopic Sleeve Gastrectomy (LSG): Maternal and Fetal Outcomes of 49 Pregnant Women

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**Objective:** To investigate the maternal and fetal outcomes of pregnancies occur after laparoscopic sleeve gastrectomy (LSG).

**Material and Methods:** Patients who underwent Laparoscopic Sleeve Gastrectomy (LSG) at our center between 2012-2017 were evaluated by telephone survey. Weight and body mass index (BMI) changes, conception times, maternal and infant characteristics during the pregnancies in the postoperative period were examined. SPSS 15.0 was used for statistical analysis.

**Results:** The follow-up information of 592 of 700 patients who had LSG in our center between 2012 and 2017 were reached. Of these patients, 487 were female (82%). Fifty-five (11.2%) of the female patients were pregnant after LSG. Six patients could not be reached. The mean age of the patients reached 31,02 years, the total number of pregnancies after LSG was 68. Nineteen (27.9%) pregnancies resulted in abortus (one in 14 patients, 2 in 5 patients), 44 births were performed (1 in 41 patients, 2 in 3 patients) and 5 patients were still pregnant.

The number of married patients before the LSG was 39 (80%) and 26 (66%) had children. While the menstrual irregularity was 35% before LSG, all of the patients after LSG stated that their menstrual cycle was regulated. Postpartum birth rate was 65%.

While the mean time interval between LSG and conception was 22.8 months, this period was 17.85 months in abortus pregnancies ( $p < 0.05$ ). The mean BMI before LSG was  $46.47 \pm 4.85$  kg/m<sup>2</sup>. The mean BMI of the women who gave birth was calculated as

31 kg/m<sup>2</sup> when they were pregnant and the patients received an average of 10.2 kg during pregnancy. The mean birth weight was calculated as 2934±633 gr, there was no correlation between weight gain and birth weight of the baby ( $p > 0.05$ ). The risk of abortion was found to be higher in patients with diabetes or prediabetes diagnosed during bariatric surgery compared to normoglycemic patients and the birth weight of the baby was found to be lower ( $p < 0.05$ ).

**Conclusion:** Post-LSG pregnancies are better tolerated than other bariatric surgical procedures, diabetes and pregnancy after early postop period increase the risk of abortion.

**Keywords:** Sleeve gastrectomy, obesity, pregnancy

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## OP-289 [Obesity]

# Accelerated Recovery Protocol after Single Anastomosis Gastric Bypass Surgery

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**Objective:** Single anastomized gastric bypass (SAGB) is a procedure that is increasingly applied in bariatric surgery. The purpose of this study is; To compare the efficacy and reliability of enhanced recovery after surgery (ERAS) with traditional approach in SAGB.

**Material and Methods:** Data of 92 patients (group 1) followed up with traditional care and the data of 216 patients (group 2) followed up with ERAS protocol were prospectively collected. SAGB was performed by the same surgeon in all patients. Groups were compared in terms of postoperative hospital stay, surgical and recovery costs, complication rates, admission to the emergency department and re-admission.

**Results:** The mean hospital stay was 5 days in group 1 and 1.2±1.3 days in group 2 ( $p < 0.001$ ). The mean surgical and healing costs were 858.6±33.1 USD in group 1 and 625.2±289.1 USD in group 2 ( $p < 0.001$ ). Specific complications (mostly hemorrhage, Clavien-Dindo IIIa) occurred in 1 (1.1%) patient in group 1 and in 3 (1.4%) patient in group 2. Fifty-seven patients (61.9%) in Group 1 and 45 (20.9%) patients in the second group admitted to the ER within one month after discharge ( $p < 0.001$ ). There was a need for hospitalization in two patients in Group 2 (0.9%), and no re-hospitalization was required in Group 1 ( $p < 0.001$ ).

**Conclusion:** It can be seen that ERAS is a feasible and safe option for patients who undergo SAGB. 87% of the patients planned to be discharged on the postoperative 1st day were discharged successfully on the desired target. Admittance of the patient to the hospital on the day of surgery, discharge of the patient on the post-operative 1st day, conversion of the anesthesia and analgesic protocols to short-acting agents and non-opioid painkillers, and the initial onset of oral feeding resulted in a 75% reduction in the mean hospital stay. Bariatric surgery is the most effective treatment for morbid obesity. Increased demand for bariatric surgery has become a major economic burden. Implementation of ERAS protocols for bariatric surgery can lead to low cost bariatric care and may lead to reduced hospitalization.

Both groups were homogeneous in terms of age, body mass index, comorbidity, operative time, complications and mortality. The only difference between the groups was the gender ratio. The ERAS procedure performed after SAGB significantly reduces hospital stay and cost. There were no significant differences in surgical results. It also reduces costs after discharge. However, controlled random studies are needed to confirm these promising results.

**Keywords:** Obesity surgery, enhanced recovery protocols, ERAS

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## OP-290 [Obesity]

# The Effects of Early Weight Loss on Bleeding and Coagulation Parameters after Obesity Surgery

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**Objective:** Obese patients are more frequently exposed to thromboembolic events due to various reasons mentioned in the literature. In patients undergoing obesity surgery, long-term weight loss and body mass index (BMI) decline as well as other obesity complications are reduced and thromboembolic events are expected to decrease. On the other hand, metabolic disorders after obesity surgery may cause mainly vitamin D and vitamin K deficiencies and electrolyte disturbances along with disorders in patients' coagulation system. Lack of some coagulation factors due to vitamin K in early period may increase the tendency to bleeding and some anticoagulant factors may lead to tendency to thromboembolic events. Subcutaneous ecchymoses and petechiae as well as thromboembolic complications that may develop in the postoperative period are clinical manifestations of this coagulation disorder. In this study, it is aimed to evaluate the changes in coagulation systems with rapid weight loss in the early period following obesity surgery.

**Material and Methods:** All patients admitted to Bursa Yüksek İhtisas Training and Research Hospital General Surgery Out-patient Clinic due to morbid obesity and who were operated between September and December 2015 were evaluated prospectively. Patients Non-voluntary to participate in the study, with the history of fibrinolytic, antithrombotic, anticoagulant, etc. (aspirin, kumadine) and who had undergone DVT or thromboembolic surgery were excluded. Patients were followed-up for 2 weeks with low molecular weight heparin (LMWH) anticoagulant agents during the post-operative period and after discharge. In addition, no antithrombotic, antiaggregant or thrombolytic drug was given to the patients during the post-operative period. Patients were discharged with a multivitamin drug free of vitamin K. Preoperative and post-operative 1st and 3rd month data were recorded in patients undergoing obesity surgery: Age, gender, weight, height, alcohol-smoking, laboratory results (PLT, PT, aPTT, INR, bleeding time, clotting time, fibrinogen, D.Dimer, albumin, calcium, ionized calcium, osteocalcin, vitamin D and parathormone). We investigated the significant changes in bleeding and coagulation parameters with weight loss recorded in patients.

**Results:** The data obtained from 28 patients were analyzed with current statistical methods. Of the patients, 25 (89.3%) were female. The mean age of the patients was 37.68. Of the patients, 28.6% were smokers and 10.7% of them used alcohol. Significant decrease in fibrinogen and thrombocyte levels at 1 month postoperatively, increase in INR value and elongation at PT and aPTT values were found.

**Conclusion:** In the first months of obesity surgery, thromboembolic events on the one hand and bleeding diathesis on the other hand are important. Close follow-up and laboratory screening of the patients in the first months is important. Low dose anticoagulants may be recommended in the early postoperative period with vitamin supplementation.

**Keywords:** Obesity, bariatric surgery, bleeding, coagulation, thromboembolism, prophylaxis

## OP-291 [Pancreas Surgery]

# Whipple Procedure for Surgical Treatment of Periampullary Tumors: Single Center, Results of 10-Year Experience

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**Objective:** Periampullary region tumors are more common in advanced age, but the most effective treatment option is surgery. Whipple procedure is still the standard treatment in periampullary region tumors. In this study, we aimed to present the results of a 10-year case series of our clinic.

**Material and Methods:** The demographic characteristics, pathological data, length of stay, complications and survival of 330 patients operated in our clinic due to periampullary region tumors were retrospectively analyzed.

**Results:** Of the 330 patients who underwent the whipple procedure between 2007 and 2017, 207 were male and 123 were female. The average age was 61.25. The exact pathology of 11% of all patients was reported as benign. The first 12-month mortality rate was 27.57% and 44.54% of the patients were alive. The morbidity rate is 32% and the mean hospital stay is 13 days. According to Medcalc Kaplan Meier analysis, the survival of the pancreas adenocarcinoma was shorter than the other periampullary region tumors ( $p=0.003$ ). In multivariate analysis, perinoral invasion and pancreatic localization were independently associated with mortality in cox regression modeling ( $p=0.047$ ,  $p=0.023$ ).

**Conclusion:** Tumor localization and perineural invasion are independent parameters that decrease the success of the whipple procedure.

**Keywords:** Whipple procedure, single center, 10 years experience

## OP-292 [Pancreas Surgery]

# The Relationship Between Nutritional Status, Performance and Survival in Patients with Pancreatic Cancer

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**Objective:** Pancreatic cancer is one of the most common disease groups for weight loss and malnutrition. Malnutrition is a clinical condition that can adversely affect patients' performance status and survival. The aim of this prospective study was to determine the nutritional status and performance status of patients with pancreatic cancer and determination of the relationship between survival time.

**Material and Methods:** 96 patients with pancreatic cancer (59.6% female) 61.4% male, mean age: 60.7 (min: 28, max: 80) were observed for min 6 months max: 2 years. Patients underwent PG-SGA and received anthropometric measurements (height, weight, upper middle arm circumference, calf circumference, skinfold thickness). Durations of performance were identified by ECOG. Survival periods were obtained from patient follow-up and recording system. Survival analyzes were performed using Kaplan-Meier curves.

**Results:** Of patients, 56.3% had surgery, 85.5% (82 patients) of all patients were found to be malnourished according to PG-SGA category. Only 11.1% of patients had normal performance and more than half (54.2%) had poor performance status. Only 9.4% (9 patients) of the patients did not lose weight and 90.6% (87 patients) lost weight (min% 2-max 37%). There was a positive correlation between malnutrition status and ECOG performance status ( $p < 0.01$ ). Calf circumference measurement was found to be  $34.4 \pm 3.03$  cm (min: 29-max: 42) in females and  $34.6 \pm 3.43$  (min: 27-max: 42) in males and  $26.9 \pm 3.47$  in females. While the mean length of the study was  $26.5 \pm 3.37$  cm (min: 20.0-max: 36.5) in males and  $20.5 \pm 6.3$  mm in females (min: 8, max: 36), in males  $13.02 \pm 7.7$  (min: 3.5, max: 34), hand dynamometer measurements were found to be  $31.02 \pm 7.64$  kg and  $20.13 \pm 6.04$  kg in males and females, respectively. Although survival times were shorter in patients with low anthropometric measurements, the difference was not statistically significant. The survival time of patients with SGA level AB and C was  $19.5 \pm 3.9$ ,  $37.7 \pm 6.7$ ,  $12.0 \pm 1$ , respectively. It was found as 3 months ( $p < 0.005$ ).

**Conclusion:** In conclusion, malnutrition in patients with pancreatic cancer affected both performance the status and survival time negatively. This group of patients should be followed closely from the diagnosis from the nutritional point of view and nutritional intervention should be performed if necessary.

**Keywords:** Pancreas, survival, pancreatic cancer, malnutrition

## OP-293 [Pancreas Surgery]

# Evaluation of the Effect of Sarcopenia on Postoperative Complications and Surveillance in Pancreatic Adenocarcinomas

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**Objective:** Postoperative complications and the effect of sarcopenia on the patients who underwent surgical resection for pancreatic adenocarcinoma were investigated.

**Material and Methods:** The prospectively recorded clinicopathological data of 65 cases of pancreatic adenocarcinoma in the Department of General Surgery, Dokuz Eylül University Faculty of Medicine, Department of Hepatopancreatobiliary and preoperative contrasted upper and lower abdomen computed tomography (CT) imaging between September 2010 and December 2016 were retrospectively reviewed. CT results were obtained with a 64-slice CT scanner in the late phase following the intravenous administration of 100 ml iodinated contrast media (300 mg iodine/ml). Total area measurements of the right and left psoas major muscles and area measurements of the erector spina (longissimus, iliocostalis and multifidus muscles) muscles were performed via the axial CT image of a single section through the L3 vertebral level. The external limits of the muscles were determined by the radiologist. The muscle tissue areas within the boundaries designated by the determination of the Hounsfield Unit Average Calculation (HUAC) range were calculated in  $\text{cm}^2$  with the help of the workstation program. Early and late phase complications of the patients were evaluated separately.

**Results:** Of the patients who had undergone surgical resection for pancreas adenocarcinoma, 47 (72.3%) were male and 18 (27.7%) were female. A significant increase was detected in the postoperative complication frequency of the patients diagnosed with Sarcopenia as a result of radiological psoas muscle measurements ( $p<0.001$ ). The calculated HUAC value was found to be a significant independent variable for each postoperative complication ( $p<0.01$ ). For infectious complications ( $p=0.02$ ), for gastrointestinal complications ( $p=0.03$ ) and for cardiac complications ( $p<0.01$ ). The absence of sarcopenia and disease-free survival were significantly increased in patients ( $p<0.05$ ).

**Conclusion:** Knowing the degree of sarcopenia present in patients with pancreatic adenocarcinoma, predicting the postoperative complications and their effects on the survey will positively affect the clinical course of the patients.

**Keywords:** Complications and effects of surveillance, pancreatic adenocarcinomas

## OP-294 [Pancreas Surgery]

# Prognostic Significance of Lymph Node Metastasis and Positive Lymph Node Ratio Logarithm (LODDS) in Ampullary Adenocarcinomas

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**Objective:** Prognostic factors affecting survival in ampullary adenocarcinomas are histopathological stage of tumor, presence of lymph node metastases, perineural invasion status and surgical margin positivity. It has been defined in many researches that the variable that has the most important prognostic value is lymph node metastasis. Numerous studies have been published examining the number of metastatic lymph nodes and the number of metastatic/total dissected lymph nodes.

In order to evaluate the prognostic significance of lymph node metastasis in recent years, a method called positive lymph node ratio (LODDS) has been defined, and studies concerning the correlation between the method and survival in stomach, colon, rectum and pancreatic cancers have been published. The prognostic importance of positive lymph node ratio logarithm in ampullary adenocarcinoma is unknown. The aim of this study is to investigate the prognostic significance of lymph node metastasis and positive lymph node ratio logarithm (LODDS) in ampullary adenocarcinoma.

**Material and Methods:** The study consisted of the retrospective review of the prospectively filled database. Patients who had been operated in our center between 2002 and 2015, with the diagnostics of pathologically ampullary adenocarcinoma with complete and reliable follow-up records were included in the study. Patients who died during perioperative period (0-90 days) and who had tumor positivity at the surgical margins were excluded from the study. Morbidities were grouped according to Clavien-Dindo (CD) classification. LODDS was calculated as  $\log(\text{number of metastatic lymph nodes}+0.5)/(\text{total number of dissected lymph nodes}+0.5)$ . LODDS groups were constituted according to LODDS values as LODDS1 ( $\text{LODDS}\leq 1.5$ ), LODDS2 ( $-1.5<\text{LODDS}\leq -1.0$ ), LODDS3 ( $-1.0<\text{LODDS}\leq -0.5$ ), LODDS4 ( $\text{LODDS}> -0.5$ ).

**Results:** A total of 42 patients (24 male, 18 female) were included in the study. The mean survival time was  $72.7\pm 7.82$  months. The 1, 3 and 5-year survival rates were 93%, 65% and 45%, respectively. Mean LODDS value was calculated as  $-1.0466\pm 0.51$ . When patients were subdivided according to LODDS values; 8 patients were assigned to LODDS group 1, 18 patients to LODDS group 2, 10 patients to LODDS group 3 and 8 patients to LODDS group 4. The mean survival time for LODDS 1, 2, 3 and 4 subgroups was 114.8, 81.8, 56.6 and 25.6 months, respectively. In addition, LODDS values were strongly correlated with perineural invasion and microvascular invasion. ( $p=0.015$  and  $p=0.001$ )

**Conclusion:** Numerous studies have been conducted to investigate the relationship between survival of lymph node metastases and survival in patients with adenocarcinoma who have a relatively long survival advantage in periampullar region cancers. The findings in our patient group support the hypothesis that LODDS values will be correlated with mean survival and will be useful in predicting average survival.

**Keywords:** Ampullary adenocarcinoma, lymph node metastasis, positive lymph node ratio logarithm, lodds

## OP-296 [Transplantation]

# Efficacy of Tubular Viscomelostomy in Late Type 2 & 3 Ureter Stenosis After Renal Transplantation

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**Objective:** The most common surgical complication observed after renal transplantation is ureter stenosis. The immediate diagnosis and treatment of this condition is important to prevent graft loss caused by urinary tract obstruction. In this study, we aimed to present the long term results of the use of end-to-side pyelocystostomy or the so-called tubular vesicopyelostomy (TVP) method in order to manage the type 2-3 ureteral stenosis after transplantation (Type 2: partial and severe fibrotic ureteric stenosis affecting  $\leq 50\%$  of ureter length and Type 3: ureteral stenosis affecting  $> 50\%$  or all of the ureter length).

**Material and Methods:** Between 2002 and 2017, 722 renal transplant patients were followed in the Bozyaka Organ Transplantation and Research Center of the University of Health Sciences. TVP operation was performed in 28 patients. Bladder capacity was above 200 ml in all the patients who underwent the method, and it was possible to release the bladder to allow for tension-free vesicopyelostomy. In this method, in order to get the bladder closer to the pelvis; The bladder is fully mobilized by retracting the lateral and posterior pedicles of the internal iliac (hypogastric) artery branches, retracting the lateral edge from the Retzius range, and from the opposite side. The superolateral edge of the bladder is then advanced to the ureteropelvic junction to be sufficiently long in the tubularized pouch. Finally, the cut-off end of the ureteropelvic junction or the proximal ureter is anastomosed directly to the urethra without tension, similarly to the Lich-Gregoir method. All anastomoses are administered using 5-0 Maxon and are routinely stented with JJ catheter. Of these patients, 17 are male and 11 are female. The mean age of transplantation was  $45.6 \pm 10.5$  years. The mean time to intervene for urinary tract obstruction was  $122.5 \pm 114.7$ .

**Results:** Twenty-one patients with a mean follow-up of  $55.1 \pm 40.9$  months were alive with functional graft and mean  $1.92 \pm 0.8$  mg/dl sCr values. Six patients returned to hemodialysis. In 5 of the 6 cases, the underlying etiology was not related to recurrent obstruction or surgical complications. Only one patient developed stenosis in the anastomosis line after the TVP operation and the patient returned to hemodialysis. As a result, the success rate of the TVP operation was 96.4%. In addition, 16 patients underwent graft coronary biopsy after surgery and only one patient had findings consistent with tubulointerstitial nephritis.

**Conclusion:** As a result, the TVP method provides an advantage over other surgical methods for bladder capacity in patients with appropriate late and complicated (long segment or full) ureteral stenosis and surgical applicability when necessary. In addition, only 1 case of tubulointerstitial nephritis has been discovered that this method is a safe method for ascending urinary tract infection. It is a safer and relatively easier method with long-term successful results compared to conventional methods.

**Keywords:** Early and late ureteral stenosis, renal transplantation, vesicopyelostomy

## OP-298 [Transplantation]

# Evaluation of the Effects of Education on Organ Donation on the Knowledge, Attitudes and Behaviors of University Students

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**Objective:** The aim of this study was to determine the effect of education on organ donation about knowledge, attitudes and behaviors about organ donation to students studying at Kafkas University School of Health Sciences Nursing Department. In addition, the Study is planned to continue at the Faculty of Education, School of Foreign Languages and Kars Vocational School.

**Material and Methods:** The study was completed with 352 students who studied in nursing department between January-June 2017. All students who are willing to participate in the training which is not selected as a sample is included in the study. Students included in the study were informed about the aim of the study, the content of the questionnaire, pre-test before the training and the post-training final test. Two separate questionnaires were completed before and after the training. In order to match the questionnaire forms of the same person, forms were asked to write a pseudonym on them. Trainings were given by researchers as structured training method. The trainings lasted an average of 45 minutes and strengthened via question-answer technique. Contents of the training is like: organ transplant history, organ transplant organs and tissues, forms of treatment, the

diagnosis of brain death, to whom can organ donation be?, most frequently asked questions and answers for an organ transplant, how does transplant coordination system work in Turkey? In order to carry out the study, permission was obtained from the ethics committee, the institution and from the students. The data were obtained by evaluating the significance test of the difference between number, percentage and importance of two percentages in SPSS 2.0 program.

**Results:** The mean age of the students was  $21.25 \pm 1.89$  and 52% were male. According to the pre-evaluation results, only 2.6% of students donated their organs before training. Considering the students' knowledge on the organs that can be transplanted; 92% of them know kidney, 85.2% heart, 73.6% liver and 44.3% lung transplantation. Of the students, 72.4% have negative thoughts about organ donation. As the cause of this negativity, 10.2% did not have the courage, 8% did not find it religiously appropriate, 7.1% had insecurity and 4.5% had a negative result despite the transplantation. Of the students, 40.3% know where and how the organ donation is made. To the question of who can be donor; 71.9% of them said "those with the blood and tissue compliance", 33.5% of them said "those who have first-degree relatives", 18.5% of them said "those who are dead", and 8% of them said "those who have the blood type similarity". The opinions of the students about the organ donation before and after the training are shown in the table. It is seen that the difference was statistically significant before and after the training.

**Conclusion:** In order to increase the organ donation rate; it is necessary to give importance to education in all stages of education from primary to higher education, to increase the number of organ donation campaigns and to prepare professional programs to raise public awareness through the media.

**Keywords:** Organ, donation, student

## OP-300 [Hernia Surgery]

# Simultaneous Panniculectomy is a Good Choice for Ventral Hernia Repair

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**Objective:** Panniculectomy and ventral hernia repair are common interventions in surgical clinics. In case both surgical procedures are performed in the same session; In addition to the advantages of a wide surgical field, reducing the tension in hernia repair, there are also disadvantages such as increased surgical site infection. However, there is still no sufficient information in the surgical literature about whether or not both surgeries should be performed together.

**Material and Methods:** Twenty-four patients who underwent concurrent panniculectomy and ventral hernia repair between 2009-2017 were evaluated retrospectively in our clinic. Patients were evaluated for age, gender, hernia size, surgical technique, operation time, drainage time, seroma, hematoma, surgical site infection, skin complications, abdominal compartment syndrome, follow-up period and recurrence. Surgeries that had been performed under emergency situations were excluded.

**Results:** A total of 18 patients were included in the study. All patients were female and the mean age was 58 years. Fourteen patients were operated with primary closure and onlay mesh technique and 4 with bridging and onlay mesh technique. Follow-up revealed recurrence in 2 patients. Four patients developed transient abdominal compartment syndrome which improved with medical treatment in the early postoperative period. Average drainage time was calculated as 13 days. One patient developed hematoma and 8 other developed seroma requiring no surgery. Skin complications developed in 6 patients. Four patients had surgical site infection that did not require mesh removal.

**Conclusion:** No significant difference was found in terms of the complications comparing the available data and the panniculectomyless ventral hernia repaired series in the literature. We believe that simultaneous panniculectomy and ventral hernia repair, which provide better cosmesis without increasing the complication in a single session, is a method that can be preferred in the selected patient group.

**Keywords:** Incisional, hernia, panniculectomy, ventral

## OP-301 [Hernia Surgery]

# Comparison of Open and Laparoscopic Repair Methods for Recurrent Inguinal Hernia Repair after Open Surgery

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**Objective:** Hernia surgery is the most common and the first of its kind in surgical practices. Minimization of postoperative recurrence and absence of pain should be the main target of hernia surgery. Although there is a dramatic decrease in recurrence rates after the definition of repair with patch, the annual risk of reoperation is still around 1.5%. In our study, we compared the results of open and laparoendoscopic methods for hernia repair in patients admitted to our clinic for inguinal hernia recurrence.

**Material and Methods:** The data of 40 patients who were operated for recurrent inguinal hernia in our clinic between July 2012 and December 2017 were analyzed retrospectively. Twenty patients with open hernia repair were defined as group 1, Twenty patients with laparoscopic hernia repair as group 2. All patients undergoing laparoscopic surgery were operated with trans-abdominal preperitoneal (TAPP) method. Demographic data, duration of operation, length of hospital stay, complication and recurrence rates of the patients were compared.

**Results:** Female/Male ratio of the patients included in the study was 4/36 and the mean age was  $52.5 \pm 13.7$ . No significant difference was found between the two groups in terms of demographic data. It has been observed that all patients underwent initial surgery using a patch. The mean time to relapse after surgery was  $21.4 \pm 14.5$  months in group 1 and  $24.05 \pm 11.7$  months in group 2. The duration of operation was  $62.3 \pm 13.3$  minutes in group 1 and  $73.3 \pm 19.1$  minutes in group 2. Comparing the developing complications; Seroma (5% vs 5%), scrotal hematoma (0% vs 5%), urinary retention (5% vs 0%), wound infection (5% vs 0%) in group 1 and 2, respectively. Postoperative hospitalization time was  $1.48 \pm 0.64$  days in group 1 and  $1.15 \pm 0.17$  days in group 2. Recurrence was observed in 1 patient (5%) in group 1 and in 1 (5%) patient in group 2 during follow-up.

**Conclusion:** Although endoscopic intervention was recommended in patients with recurrent inguinal hernia after open surgery, it is still not sufficiently widespread today. In our study, complication and recurrence rates were found to be similar. However, we believe that it is more appropriate to perform the second intervention from the more virgin posterior wall. Due to the small number of cases and the retrospective nature of our study, we think that these findings should be evaluated with a large case series and prospective randomized studies.

**Keywords:** Recurrence, inguinal hernia, TAPP, laparoscopic

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## OP-302 [Hernia Surgery]

# Factors Affecting Strangulation and Development of Necrosis in Incarcerated Abdominal Hernia

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**Objective:** Although the majority of abdominal hernias are asymptomatic, they can cause serious problems when they are complicated. This study was performed to determine the factors affecting the development of necrosis and strangulation in incarcerated abdominal hernia.

**Material and Methods:** The records of 44 patients who were operated for incarcerated abdominal hernia between April 2009-January 2018 were retrospectively reviewed.

**Results:** Of the patients, 28 were male and 16 were female and the mean age was 68.95 (range: 41-102). Thirty-one patients (70.5%) had an additional disease (16 had respiratory system, 24 had cardiovascular system, 5 had endocrine system, 5 had urinary system, 3 had central nervous system, 1 had hepato pancreato biliary system). Thirty patients (68.2%) were operated for inguinal hernia (7 femoral, 23 inguinal) and 14 (31.8%) for ventral hernia (8 incisional, 5 umbilical, 1 epigastric). Twenty (54.5%) patients had strangulation and 20 patients (45.5%) had necrosis. Omentum resection was performed in 4 of the patients with necrosis, small intestine resection in 14, and large intestine resection in 2. Hernia repair was performed to ten patients without using patch and to 33 patients using polypropylene patch (20 with Lichtenstein, 8 with onlay, 5 with plug-patch). To one patient hernia repair was not performed. The mean hospitalization period was 7.43 days (range: 1-35) and the mortality rate was 13.6%. In univariate analysis, it was found that mortality was correct with necrosis ( $p:0.045$ ) and inversely correlated with patch use ( $p:0.011$ ). The inverse relationship seen in the use of patches was attributed to the preference of primary repair in patients with poor general condition or in the infected area. The only factor that influenced the development of strangulation and necrosis was the time of onset of symptoms (for strangulation  $p:0.034$ ;  $> 24$  hours at 70.6% -  $< 24$  hours at 29.4%; for necrosis  $p:0.047$ ;  $> 24$  hours at 58.8% -  $< 24$  hours at 41.2%).

**Conclusion:** Mortality rate of the incarcerated abdominal hernia is high and the most important factor determining mortality is the development of necrosis. Since the most important factor affecting the development of necrosis is the occurrence time of symptoms, surgical intervention within the first 24 hours is important.

**Keywords:** Hernia, incarcerated, groin, necrosis, strangulated



## OP-303 [Hernia Surgery]

## Laparoscopic Extraperitoneal Hernia Repair under Spinal Epidural (Combined) Anesthesia

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**Objective:** Laparoscopic method for inguinal hernia repair has become widespread in recent years. Laparoscopic total extraperitoneal hernia repair (TEP) is the most widely used endoscopic hernia repair technique. TEP operations are usually performed under general anesthesia. However, in recent years, there are studies of TEP operations performed by regional anesthesia techniques. We aimed to present our experience with TEP operations under spinal epidural (combined) anesthesia in our clinic.

**Material and Methods:** TEP operations performed between December 2016 and October 2017 under spinal epidural anesthesia were retrospectively analyzed. In the CSEA technique, the L3-L4 range was reached while the patient is in sitting position and then 18-G Tuohy needle was placed in the epidural space using the loss of resistance with the saline technique, and then the 26-G spinal needle was inserted into the subarachnoid space from the Tuohy needle. 3 mL of 0.5% hyperbaric bupivacaine and 10 mg of fentanyl were injected within 30 seconds after the cerebrospinal fluid flow was confirmed. Then the spinal needle was removed and the 20-G epidural catheter was entered into the epidural cavity in the cephalic direction. Twenty milliliters of mixture (10 mL of 0.5% bupivacaine, 5 mL of 2% lidocaine, 1 mL of fentanyl and 4 mL of isotonic saline) were injected into the epidural space. Patients were placed in the 15 ° Trendelenburg position and the sensory block level was checked with a ping-pong test every minute. Surgical procedure began when the block reached T4. CSEA was transformed into general anesthesia in cases of inadequate anesthesia and the patient's wishes. Age, gender, body mass index, operation time, duration of anesthesia and adverse effects were evaluated in terms of patient satisfaction.

**Results:** The intervention was performed successfully in 28 of the 30 patients included in the study. Two patients underwent general anesthesia due to inadequate anesthesia. There were 23 female patients and 5 male patients. The mean age was 35.92±10.87 and the body mass index was 23.57±2.91. Eleven patients had indirect hernia, 9 patients had direct hernia and 8 patients had both direct and indirect hernia. The total operation time was 54,75±6,72 and the duration of anesthesia was 23,85±1,62. Muscle relaxation and surgical field opening were adequate in all patients. None of the patients returned to revision or TAPP surgery. The mean hospital stay was 27,71±3,11 hours. Although 9 patients developed peritoneal rupture during the surgery, only 1 patient developed mild shoulder pain and abdominal pain. Patients without peritoneal tears did not have shoulder pain or abdominal pain. Urinary retention was induced in 3 patients postoperatively and headache developed in 2 patients. One patient developed anxiety during the operation and the patient was comforted by mild sedation. Three patients had seroma and 2 patients had scrotal edema. Trocar site infection developed in 2 patients despite antibiotic prophylaxis. Patient recovered with medical treatment. Hypotension, nausea and vomiting were not seen in any patient. Patient satisfaction (likert scale) was 4.89±0.31. The mean follow-up period was 10 months and no early recurrence was observed.

**Conclusion:** Spinal epidural (combined) anesthesia method is an effective and reliable method in terms of patient satisfaction, surgeon satisfaction and postoperative pain in laparoscopic extraperitoneal hernia repair operations.

**Keywords:** Spinal epidural anesthesia, inguinal hernia, TEP, shoulder pain

## OP-304 [Hernia Surgery]

## Comparison of Polypropylene and Silicone Coated Polypropylene Patch in Ventral Hernia Repair

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**Objective:** Studies have been going on for years in order to find the patch products with maximum endurance, tissue compatibility and minimum stickiness in Ventral hernia repair. Polypropylene is the most commonly used patch product in repair. Studies on the use of silicone material and its effectiveness are limited. In this experimental study, it is aimed to compare the effects of a silicon layer and silicone gel coated polypropylene patch with polypropylene patch in ventral hernia repair.

**Material and Methods:** In the study, 45 Wistar-Albino female rats were randomly divided into 3 groups. An abdominal defect was performed with 3 cm midline incision in rats. A silicone layer, polypropylene patch and silicon coated polypropylene patch

were used for the repair of defects respectively. The peritoneum was not closed in repair, the materials were placed directly on the abdominal organs. All rats were sacrificed on the 28th postoperative day. Intraabdominal adhesions were evaluated. Breaking forces of materials used were measured.

**Results:** Adhesion score was significantly lower in silicon coated polypropylene patch group than silicone layer and polypropylene patch group ( $p<0.05$ ). The degree of histopathological maturation of the wound (DHMW) was significantly lower in the silicone layer group than the other two groups ( $p<0.05$ ). No significant difference was found between the polypropylene patch group and the silicon coated polypropylene patch group in terms of DHMW. When the groups are compared in terms of breaking forces; The magnitude of the breaking forces in the polypropylene patch group was significantly higher than the other two groups ( $p<0.05$ ).

**Conclusion:** Although the application of a polypropylene patch covered with silicone gel directly on the intraabdominal organs in the repair of large abdominal defects slightly reduced the tension of the tissue tension compared to the polypropylene patch, it had no adverse effect on the wound maturation. It was also concluded that this patch does not cause adhesion between the intestines with patches and reduces the adhesions between the patch and the omental structures.

**Keywords:** Adhesion, polypropylene patch, silicone, ventral hernia

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## OP-305 [Hernia Surgery]

# Abdominal Wall Reconstruction Methods in Infectious Hernia Undergoing Abdominal Component Separation

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**Objective:** Incisional hernias cause significant loss of workforce and morbidity. Abdominal component separation (ACS) technique is used to prevent complications due to increased intraabdominal pressure in closure of large incisional hernias. Post-fascia closure after reconstruction of the abdominal wall following ACS is among the options. Self-adhesive patches are more costly as a disadvantage, but can reduce the length of hospital stay and drainage time. In our study, we aimed to present our experience with ACS application in patients operated with incisional hernia diagnosis.

**Material and Methods:** Patients who were operated with the diagnosis of incisional hernia in our clinic were examined. Preoperative computed tomography images of the patients were examined and it was decided to use ACS method in cases with hernia sac/abdominal cavity rate above 20%. Reconstruction methods, demographic data, length of hospital stay, operative times and draining durations of patients undergoing ACS were evaluated.

**Results:** In this study, 7 incisional hernia patients in our clinic for one year were included. The mean age of the patients was 57 years (range: 36-90). The mean duration of hospital stay was 7 days (range: 2-26) and the duration of drainage period was 7 days (range: 2-27) as well. Mean operative time was 82 (range: 60-110) minutes. Five (71.4%) patients received a polypropylene self-adhesive patch. Two (28.6%) patients who were classified to have contaminated surgery underwent patchless repair. The average time of patch application was 3 min. In the patch applied group; The mean duration of drainage was 5 days and the duration of hospital stay was 4 days which was shorter when compared.

**Conclusion:** Tension in the presence of large defects in incisional hernias may lead to increased intra-abdominal pressure. Therefore, ACS application is beneficial. In these patients, the use of self-adhesive patch following the closure of the abdomen provides a safe and fast surgery due to the short duration of application, no need for additional detection, and the equal adhesion to the tissue at all levels.

**Keywords:** Incisional hernia, surgery, abdominal component separation, patch application

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## OP-306 [General Surgical Diseases]

# The Role of Familial Mediterranean Fever in Ongoing Abdominal Pain After Appendectomy

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**Objective:** Appendectomy is the most common emergency surgery, and preoperative diagnosis and treatment protocols are clarified. However, in rare cases, in polyclinic follow-ups after appendectomy, some patients are observed to have abdominal pain that is not based on complications and constant and/or which continues with a decreasing tendency. In this study, we wanted to evaluate whether the Familial Mediterranean Fever (FMF) play a role in the abdominal pain occur unexplicable in the early period after appendectomy.

**Material and Methods:** Patients who had appendectomy, acute appendicitis in the pathology, no surgical complication during and after the operation, and those who had abdominal pain during the second and fourth week of the polyclinic were selected. All exon sequence analysis of the Mediterranean fever gene (MEFV) gene which was proven to have role on FMF pathology in case mutated was performed in the selected patients. For this purpose, after venous blood sample taken from the patients (5 ml) and put in purple cap tubes; total genomic DNA was isolated using the QIAGEN peripheral blood isolation kit, which was optimized for the standard ethanol precipitation method. The isolated genomic DNA was first amplified by polymerase chain reaction (PCR) with suitable forward/reverse primers for each exon. After this process, the replicated parts/regions were sequenced by Sanger Sequence Analysis method. Thus, a total of 10 exons in the MEFV gene of the patients and the nucleic acid sequence in these regions were determined, including 50 base pairs of intronic regions in each sides (flanking). Results were compared with NCBI and InFever databases to identify clinical/non-clinical variations.

**Results:** Of the 48 patients, 30 were male and the mean age was 27.3 years (range, 11-74 years); whereas, the mean age of 18 female patients was 29.4 years (range, 10-61). The samples obtained from the patients were inspected by Sanger DNA Sequence analysis method and some mutations were detected. As a result, at least one heterozygous mutation was detected in the MEFV gene of 31 of 48 patients (21 males, 10 females) (64.6%); no mutation was found in 17 (9 males, 8 females). In 31 patients with mutation, 5 (3 males, 2 females) were found to have amyloidosis onset and were found to benefit from continuous colchicine treatment and a significant reduction in complaints. In terms of MEFV gene mutation, 18 of the patients had simple heterozygote, 2 had homozygous, 8 had dual composite heterozygous and 3 had triple compound heterozygote mutant genotype.

**Conclusion:** FMF should not be ignored in our country, which is a mediterranean country, for complaints of abdominal pain after appendectomy. Surprisingly, the onset of amyloidosis seen in 5 cases should be supported by increasing number of cases and clinical studies.

**Keywords:** Familial mediterranean fever, acute appendicitis, amyloidosis, FMF, nonadherence pain, MEFV gene

## OP-307 [Endocrine Surgery]

# Transoral Robotic Parathyroidectomy: A New Approach in Non-Scarring Surgery

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**Objective:** As in all areas, minimally invasive techniques continue to develop in endocrine surgery. The small size of the endocrine organs and the patients' expectation for less scar are the main factors that increase the orientation to this area. In classic surgical procedures of the thyroid and parathyroid glands, the scar caused by the anterior incision of the neck can sometimes be a problem. The expectation of patients is to have minimal scar, and even better no scar at all. In this case, we aimed to present a case of primary hyperparathyroidism in which we operated robotically with a transoral vestibular approach.

**Material and Methods:** Forty-three year old female patient presented to the orthopedics clinic with pain in her right shoulder. Bone scintigraphy revealed multiple metastatic bone lesions on the body. Positron emission tomography was also reported as unclear tumor with the same findings. Bone biopsy was performed from metastatic bone lesion. On parathyroid scintigraphy and neck ultrasonography on the arrival of Brown tumor, left lower parathyroid adenoma was seen. The patient was given a robotic parathyroidectomy with a transoral vestibular approach with the necessary information and informed consent. Parathyroidectomy was performed with three arms using da Vinci XI system. Neuromonitorisation was performed during surgery. The postoperative parathormone level decreased from 815 pg/ml to 70 pg/ml. Pathological examination reported parathyroid adenoma.

**Results:** Thyroidectomy with transoral vestibular approach began to spread rapidly around the world after Anuwong A. published in 2016. Other techniques, such as the axillary and retroauricular approach, which are described in order to get rid of the scar in the neck area, have been rapidly accepted in terms of the distal and midline view compared to non-advantageous techniques.

**Conclusion:** Studies on the results of thyroidectomy and parathyroidectomy performed with this technique showed that the method has safe, feasible and acceptable complication rates. At the same time, this method is the alternative minimally invasive technique that best responds to the patients' scars.

**Keywords:** Parathyroid adenoma, robotic surgery, non-scarring surgery

## OP-308 [Breast Diseases and Surgery]

# The Place of Sentinel Lymph Node Biopsy (SLNB) Using “Isosulphan Blue” in the Evaluation of Axillary Dissection (Level I and II) Results in Breast Cancer

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**Objective:** Whether or not metastasis to axillary lymph nodes in breast cancer patients is an important factor in the planning of adjuvant systemic chemotherapy and the prognosis of the disease. However, axillary dissection has not been shown to contribute to the treatment of patients without axillary lymph node metastasis and disease-free survival. In addition, many studies have shown that the axillary lymph nodes show a metastatic state of SLNB with a high accuracy rate. In addition, SLNB has been shown to have negligibly low morbidity compared to axillary dissection. The aim of this study was to investigate the role of SLNB in breast cancer surgery using isosulfan blue.

**Material and Methods:** A total of 48 patients who were operated for breast cancer in a 2-year period in our clinic were included in the study. Of the patients, 45 went through SLNB using blue dye (isosulfan blue) and 40 of them was subjected to's Leve I and II axillary lymph node dissection. SLN was initially evaluated intraoperatively in frozen section, followed by routine pathological examination with H & E along with axillary lymph nodes. The mean age of the patients was 52, and a total of 570 lymph nodes were removed by axilla dissection within a range of 7 to 23 where the average was 14,25. A total of 29 metastatic lymph nodes were removed from 10 patients with axillary lymph node metastasis. Forty-eight patients had SLN (93.75%) and 3 patients had no SLN. Metastasis was detected in 17 of 45 patients and no metastasis was detected in 28 of the patients. Complementary axillary dissection was not performed in 5 out of 28 patients without SLN involvement. Axillary metastasis was detected in 9 of 17 patients with SLN metastasis and not detected in 8 of them. Axillary metastasis was detected in one of the 23 patients without SLN metastasis followed by axillary dissection; whereas, 22 of them revealed axillary metastasis. Sensitivity was found to be 90%, specificity was 73%, negative predictive value was 95.6%, false negativity was 10%.

**Results:** SLNB has the potential to detect involvement status with a high accuracy without removing level I and II axillary lymph nodes. In our study, no axillary involvement was observed in 22 of 23 patients who underwent axillary dissection without SLN involvement. In addition, the morbidity rate as a result of SLNB applications is negligible compared to routine axillary dissection. Not only do level I and II axillary lymph node removal and examination meet our expectations from the axillary dissection, but together with radiotherapy, the morbidity is close to complete axillary dissection.

**Conclusion:** Our results showed that SLNB using isosulfan blue could be used as a minimally invasive and effective method in the evaluation of axillary lymph node metastases in appropriate breast cancer patients.

**Keywords:** Breast, cancer, sentinel, lymph



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**POSTER PRESENTATIONS**

## PP-0001 [Emergency Surgery and Trauma]

# A Peroperative Surprise: Intussusception of the Appendix: Case Presentation

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**Introduction:** Acute appendicitis (AA) is a condition that is the mostly encountered situation by emergency physicians and requires emergency surgery. In this study, a patient diagnosed with AA by using clinical and laboratory testing and ultrasound (US) and detected to have Type 3 appendix intussusception was examined in terms of diagnosis and treatment approach.

**Case:** A 29-year-old male patient was admitted due to severe nausea and vomiting and abdominal pain that were ongoing for 2 days. The physical examination revealed diffuse abdominal tenderness and defense and rebound in the right lower quadrant. No abnormality, except the white blood cell value of 17000/ml, was observed in his analyses. The result of ultrasonographic evaluation was reported as the appendix with increased diameter (approximately 11 mm) and increased echogenity in the surrounding mesenteric tissue. The patient was operated with the pre-diagnosis of AA. The operation was started with the McBurney incision. The appendix was observed to be inflamed. Because it was attached to the mesenterium of the ileum by curling on its own mesenterium, its mesenterium was separated so as to control the bleeding with sharp dissections. A massive structure was palpated at the junction of the appendix and the cecum. The cecum was mobilized. The massive structure was thought to be associated with the the appendix intussusception (AI). When the appendix serosa was opened and the appendix was slowly hanged, it was observed that the massive form was disappeared by filling into the appendix. The serosa was checked and the appendectomy was performed from the base of the cecum. The result of the pathological evaluation was reported as the 7,3 cm material consistent with AA, the widest of which was 1,3 cm in diameter. Its serosa was observed to be surrounded by purulent exudate and the appendix wall was bleeding in the serial sections.

**Conclusion:** Appendix intussusception was firstly defined in a 7-year-old boy by Mckidd during postmortem examination in 1858. The AI classification performed by Moschowitz in 1910 was modified by McSwain in 1941. In the review of Chaar et al., while only 32% of the patients were diagnosed preoperatively, 63% of these patients defined chronically increasing and decreasing abdominal pain, intermittent nausea and vomiting, and rectal bleeding from time to time. It was reported that the diagnosis was established through the examination of pathological specimen in 11% of the patients and during surgery in 57% of them. While 19% of the patients had only inflammation, 33% had endometriosis, 19% had mucocoele, 11% had adenoma, 7% had carcinoid tumor, and 6% had adenocarcinoma. A wide variety of surgical procedures ranging from appendectomy to right hemicolectomy were performed on the patients.

According to the review of Chaar et al., we should reply three questions. The first one is "should simple tests be sufficient for the diagnosis of acute appendicitis?". The second question is that "what should be considered while deciding on the margins of resection in such a case?". The third question is that "What are the possible traps that can be encountered while planning laparoscopic appendectomy in a similar case?". In conclusion, surprises that can be caused by an emergency situation such as AA can be the beginning of long struggles both for patient and for surgeon. It should be kept in mind that the pain in the right lower quadrant can result from other pathologies as well as appendicitis and intussusception should also be remembered among these parameters. In the suspected cases, CT should be used for confirmation and surgical therapy should be planned.

**Keywords:** Acute appendicitis, emergency surgery, intussusception

## PP-0002 [Emergency Surgery and Trauma]

# Grade III Duodenal Laceration Developing after Blunt Abdominal Trauma: Case Presentation

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**Introduction:** Duodenal injuries are rarely seen because of their preserved location in the retroperitoneum. They generally occur after deep penetrating or force-induced blunt traumas. Isolated duodenal injuries often develop as laceration or hematoma. Therefore, they are among traumas which are sometimes difficult to diagnose and treat and have high morbidity and mortality

rates. In this study, it was aimed to present a case of grade III duodenal injury developing after force-induced blunt trauma with literature.

**Case:** A 20-year-old male was admitted to the emergency unit due to the complaints of nausea, vomiting, and abdominal pain that occurred after he had been stuck between the truck and the wall. His physical examination revealed tenderness and defense in the whole abdominal quadrant. Free fluid was detected in the pelvis in the CT of the entire abdomen. It was decided to perform emergency laparotomy with the diagnosis of post-trauma acute abdomen. The laceration focus of the patient, who was defined to have grade III laceration in the 4th duodenal portion according to the AAST-OISC classification (American Association for the Surgery of Trauma - Organ Injury Scaling Committee), was primarily repaired. On the postoperative 3rd day, the patient developed dyspnea and he was diagnosed with atelectasia. After his complaints completely regressed with medical treatment, he was discharged with full recovery on the postoperative 8th day.

**Conclusion:** In blunt traumas, duodenal injuries are sometimes diagnosed late because of the localization of the duodenum. Taking patient's history elaborately, careful physical examination, choice of appropriate imaging technique on time, and a complete exploration in the operation are important for reducing the risks of morbidity and mortality. In the injuries of the organs with retroperitoneal localizations, such as the duodenum and pancreas, the findings of imaging techniques can be non-specific; however, we think that surgical exploration is always the first choice in cases suggesting acute abdomen according to the results of physical examination.

**Keywords:** Blunt trauma, acute abdomen, duodenum, retroperitoneum

## PP-0003 [Emergency Surgery and Trauma]

# An Injury Caused by Buckshot From a Pump Action Shotgun

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**Introduction:** Shotguns are the guns that are used in hunting and sports competitions. Because these guns are easily accessible, they can be used for the purpose of attack and suicide. Particularly in injuries caused by buckshot from shotguns, morbidity and mortality associated with organ and vascular damages can occur. These injuries are encountered in men in the third decade more frequently across the world. There is no statistical study in our country. In gunshot injuries, organ damage is seen at the rate of 90%. The small intestine, colon, and liver are the most commonly affected organs.

**Case:** A 32-year-old young male patient was admitted to the emergency unit due to gunshot injury. His vital signs were normal. There were entry holes of buckshot in the left lower quadrant and left iliac region. He had open dirty wound in the iliac region and comminuted fracture. No significant impairment was observed in his laboratory values. Because his vital signs were stable, contrast-enhanced abdominal tomography was performed. Air values were observed in the left paracolic area in the abdomen and an image of a metallic foreign body was viewed in the abdomen. A comminuted displaced fracture in the left iliac wing and buckshot pieces under the skin were observed. The patient was taken into operation and an approximately 1 cm perforated area was detected in the middle area of the rectum in the exploration. No contamination was seen and primary repair was carried out considering the PATI (penetrating abdominal trauma index) score. The patient was discharged without the development of any complication on the 7th day.

**Conclusion:** Different from other gunshot injuries, injuries caused by hunting shotguns can damage a wider area. The buckshot passing the peritoneum can lead to organ and vascular injuries. Generally, they do not have exit holes. In patients with stable general condition, tomography is useful for the detection of solid organ and retroperitoneal organ injuries. The rate of organ injuries is 95-98% in damages passing the peritoneum. Laparotomy is essential in such cases. Despite the recent developments in trauma surgery, there is no consensus on the surgical technique for colon injuries. Especially in hemodynamically stable patients with the intraoperative ATI score below 25, without peritoneal contamination, and with short duration of surgery, colostomy procedures gave its place to primary repair practices.

**Keywords:** Gunshot injuries, pump action shotgun, surgical technique

## PP-0004 [Emergency Surgery and Trauma]

# Case Presentation: Superior Mesenteric Vein Thrombosis Associated with Multiple Thrombophilic Genetic Mutations in a Young Patient

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Mesenteric venous thromboembolism (MVTE), which is generally diagnosed late, constitutes approximately 5-15% of mesenteric ischemias. The factors in its etiology include hereditary or acquired coagulation disorders, cancer, intraabdominal infections, oral contraceptive usage, and cirrhosis. A 34-year-old male patient was admitted to the emergency unit due to pain in the left upper quadrant. It was learned in his history that the pain had continued for one month but gradually increased in the last two days. No abnormality was found in his history. The physical examination revealed tenderness and defense in the left upper quadrant and epigastric region in the abdomen. There was no finding of rebound. In the laboratory analyses, the value of hemoglobin (Hb) was 12,6 g/dl and the value of WBC was 9800/uL. The contrast-enhanced computed tomography of the abdomen was performed on the patient. The tomography revealed infarction areas in the subcapsular region in the lateral of the middle zone of the spleen and free fluid densities consistent with blood around the spleen. Moreover, it was observed that the diameter of the superior mesenteric vein (SMV) apparently increased and there was contamination and free fluid in the peritoneum in the left upper and middle quadrants of the abdomen. The findings were consistent with venous ischemia. Because the patient had the findings of peritoneal irritation, suspected mesenteric venous ischemia, and also rupture associated with splenic infarction, it was decided to perform laparotomy. No sign of ischemia was observed in the small intestines. The patient was performed splenectomy. The patient was discharged on the postoperative (PO) second day. On the PO 7th day, he was re-admitted to the emergency unit due to the complaints of severe abdominal pain, nausea, and vomiting and it was learned from his history that he had no complaint until the PO 6th day and his complaints began suddenly. In the abdominal examination, tenderness, defense and rebound were detected in the right lower quadrant. In his laboratory tests, the value of WBC was 34000/uL and the value of Hb was 11,1 g/dl. No abnormality was seen in his biochemical parameters. The contrast-enhanced tomography of the abdomen revealed ischemic findings in the small intestines in the right lower quadrant. The patient was urgently operated with the pre-diagnosis of mesenteric ischemia. Circulatory impairment was observed in a 60-cm segment in the proximal ileal loops. The patient was performed segmentary small bowel resection and isoperistaltic side-to-side anastomosis. Contrast-enhanced abdominal tomography was performed for control. It was observed that thrombi in the portal vein and SMV were constant, but no finding of ischemia was encountered in the intestines. A treatment regimen was initiated on the patient. Then, the patient, who tolerated the regimen, was begun oral warfarin therapy. In the control examinations in the outpatient clinic, blood sample was taken from the patient for genetic testing for hereditary thrombophilia. As a result of the genetic screening, the patient was found to have PAI SERPINE 1 homozygous 4G/4G, MTHFR homozygous 1298 CC, and factor II prothrombin 20210GA heterozygous mutations. MTHFR C667T, Factor 13 V34L, and Factor V Leiden mutation analyses were reported as normal. The patient was consulted to the department of hematology and he was recommended to continue anticoagulant therapy. Mesenteric venous thromboembolism can be seen in the young population. Because genetic factors are at the forefront in the etiology of these cases, the patients should definitely be performed genetic testing and high-risk patients should be followed closely and provided to receive lifelong anticoagulant treatment.

**Keywords:** Mesenteric vein thrombosis, thrombophilia, genetic mutation

## **PP-0005 [Emergency Surgery and Trauma]**

# **Cases of Falling Down from Height in the Province of Kars**

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**Objective:** Falling from height and related injuries are important public concerns and they are the cases that should be paid attention. In this study, it was aimed to review our data on patients admitted to the Emergency Unit of Kars Kafkas University due to falling from height and to present them.

**Material and Methods:** The study included 200 patients that were admitted to the Emergency Unit of Kafkas University Faculty of Medicine between January 2012 and July 2017. Their files were retrospectively evaluated. Patients' demographic features, falling distance, falling type, injured organs, treatment methods, and mortality rates were recorded. Kars is a province with a population of 289.786. People in the rural areas of the city earn their lives from agriculture and livestock breeding. They do agricultural labor from May to the end of September. Therefore, the cases of falling from horses and donkeys are seen more often in summer. In the city center, the cases of falling from heights in the construction sites are more common in summer because construction sector is busier during summer. In the study, hospital admission and discharge data of patients falling from height were collected from their files. For exitus cases, the causes of deaths were learned from the autopsy reports. The following groups were included in the study: 1. Falling from saddle beasts, 2. Falling from a specific distances (such as in-house fallings and fallings from garden wall and roof), 3. Falling from height in a construction site. The patients that had suspected death and that were referred to our hospital after being treated in another hospital or were not followed up in our hospital after the first treatment were excluded from the study.



**Results:** Our study included 200 patients falling from height. Of these patients, 184 were male and 16 were female, and 176 were hospitalized. Ambulatory care was planned for 24 patients after they consulted to the emergency unit. The mean age of the patients was 29+/-11.2 years. The mean height of fallings was 6+/-2 m. All the cases of fallings were accidental. The Glasgow Coma Scale score was lower than 8 in fallings from heights over 5 meters. The number of fallings from saddle beasts was 55, the number of fallings from a specific height was 62, and the number of fallings from height in construction sites was 83. Thirty-two of them were those falling from heights of 5+/-2 meters and working in construction site. These patients died due to hemorrhagic shock and multiple organ injuries. While the number of patients with extremity injury was 122, the numbers of patients with thoracic injury, intraabdominal injury, head trauma, and multiple organ injury were 16, 20, 10, and 32, respectively. After admitting the patients to the emergency unit, the indications for surgery were diagnosed according to the results of physical examination, laboratory analyses, and radiological imaging techniques. The rate of mortality was 16%. The mean duration of hospitalization was 20,2+/-14,3 days.

**Conclusion:** Patients falling from height should be evaluated with a multidisciplinary approach and imaging techniques should be used for determining the severity of trauma in cases. In cases of falling from height, exposure to such traumas will be decreased by taking necessary precautions and improving the socio-economical levels of families.

**Keywords:** Falling from height, extremity, injury

## PP-0006 [Emergency Surgery and Trauma]

# The Role of the Parameters of RDW, NLR, and MPV in the Diagnosis of Acute Appendicitis

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Acute appendicitis is the most commonly seen cause of acute abdomen and appendectomy is the most frequently performed emergency surgery. Although the rate of negative appendectomy has decreased compared to that in the past, it still remains around 5%. Complete blood count is a simple and cheap technique that is easily accessible and applicable in every centers. It has been reported in some studies that some parameters can help the diagnosis of acute appendicitis as well as elevated white blood cell count. In our study, 131 patients operated due to the pre-diagnosis of acute appendicitis were examined. Acute appendicitis was not pathologically found in 13 cases (negative appendectomy rate: 10%). Compared to the acute appendicitis group, statistically significant differences were detected between two groups in terms of the values of white blood cell count (WBC), mean platelet volume (MPV), and neutrophile/lymphocyte ratio (NLR) ( $p < 0.001$ ,  $p = 0.041$ , and  $p = 0.001$ ). In the ROC analysis, the cut-off values for WBC, MPV, and NLW were 9500, 8.11, and 3.285, respectively. In conclusion, with the complete blood count analysis, the values of NLR and MPV apart from WBC can be helpful in the diagnosis of acute appendicitis. We think that a new scoring system can be used with the cut-off values that would be obtained with more cases or these parameters can be integrated into the existing scoring systems.

**Keywords:** Acute appendicitis, complete blood count, mean platelet volume, neutrophile lymphocyte ratio, white blood cell

## PP-0007 [Emergency Surgery and Trauma]

# A Rare Case: Splenic Injury Developing after Colonoscopy

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**Introduction:** Gastroscopy and colonoscopy is the most commonly used interventional procedure performed for diagnosis and treatment of gastrointestinal system diseases. Bleeding and perforation are the most frequent complications that develop after colonoscopy. One of the rarest complications is splenic injuries. The occurrence of these injuries can be associated with excessive stretching of the splenocolic ligament. A hemodynamically stable patient with grade 1, 2, and 3 injury can be applied non-operative approach under close supervision.

**Case:** A 53-year-old female patient was admitted to the emergency unit due to the complaint of abdominal pain. It was learned from her history that she had been performed colonoscopy in an external center 5 hours ago and her abdominal pain had increased exacerbatingly. Tenderness was detected in the left upper quadrant of the abdomen in the physical examination. Her hemoglobin value was 12 g/dl. In the abdominal ultrasonography, 73x29 mm and 35x15 mm appearances consistent with

hematoma were viewed in the diaphragmatic surface of the spleen and in the lower pole, respectively. There was no free fluid and fluid collection in the abdomen. The patient, whose hemodynamic condition was stable, was performed abdominal tomography and similar findings were detected. The patient, who was found to be grade 3 according to the Abbreviated Injury Scale (AIS), was hospitalized and followed conservatively. The values of blood pressure, pulse, urine, hematocrit, and leukocyte were evaluated hourly and abdominal examination was performed frequently. After 48 hours, because the findings of examination and laboratory analysis were stable, the patient was begun oral feeding and mobilized. The patient, whose hematoma was found to be regressed in the control radiological imagings, was discharged after one week by recommending control examination.

**Discussion:** Colonoscopy is the golden standard method for the detection of colorectal pathologies. After colonoscopy, some complications such as bleeding (0,24-0,33%) and perforation (0,008-0,19%) can develop. The rarest complication, which is not found frequently in literature, is splenic injuries. In many studies, non-operative treatment approach has been mentioned for hemodynamically stable patients with grade 1, 2, and 3 splenic injuries. Sepsis associated with postsplenectomy and possible complications after laparotomy have been prevented. Moreover, tomography is an important technique for conservatively followed patients. Colonoscopy should be performed by experienced physicians and a persistent approach should be avoided in this procedure. We think that, regardless of how complications are corrected (surgical or medical treatment), colonoscopy should be performed by general surgeons working in cooperation with the team.

**Conclusion:** The main question is which treatment method can be applied to which patient. We suggest that, with suitable working conditions and adequate knowledge and skill, non-operative treatment can be used in trauma patients with stable hemodynamics and grade 1, 2, and 3 injuries.

**Keywords:** Colonoscopy, complication, splenic injury

## PP-0008 [Emergency Surgery and Trauma]

# Air in the Hepatic Portal Venous System Due to Intestinal Obstruction

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**Introduction:** Air in the hepatic portal venous system was firstly defined in patients with mesenteric ischemia. In the following studies, it was reported to be seen also in patients with blunt abdominal traumas, intestinal obstruction, ulcerative colitis, necrotizing bowel diseases, intraabdominal abscess, gastric ulcer, gastric cancer, pseudomonas sepsis, and diverticulitis and after hemicolectomy. Mesenteric ischemia should be kept in mind in the differential diagnosis and clinical and laboratory findings should be evaluated considering that other causes can be included in the etiology.

**Case:** A 43-year-old male patient was admitted to the hospital due to the complaints of diffuse abdominal pain that had begun one day ago, nausea, vomiting, and inability to defecate. It was learned from his history that he had undergone appendectomy for acute appendicitis 10 years ago and operated due to incisional hernia 2 years after this surgery. In the examination, his body temperature was 36,4 °C, pulse was 96/min, respiratory rate was 20/min, and blood pressure was 138/95 mmHg. He had distension and tenderness in his abdomen, but there was no defense and rebound. The intestinal sounds were hypokinetic. In the laboratory analyses, leukocyte count was 20.260/mm<sup>3</sup>, blood glucose at admission was 256mg/dl, LDH was 195 U/L, amylase was 25 U/L, AST was 32 U/L, and ALT was 35 U/L. Other biochemical values were normal. In the direct abdominal radiography in standing position, small bowel-type air-fluid levels were observed and there was no free air in the abdomen. Abdominal computed tomography revealed diffuse air-fluid levels in the small intestines in the abdomen. Air densities demonstrating a linear extension in the portal vein and branches and in the liver parenchyma were detected. Because mesenteric ischemia could not be eliminated, the patient was taken into emergency operation. It was intraoperatively observed that his all small intestines were dilated, intestinal walls were edematous, and he had no mesenteric ischemia state. There were adhesions between the bowel loops in association with the previous operations. The patient was performed bridectomy. Prolene mesh was applied to the patient having recurrent incisional hernia. He was discharged on the postoperative 8th day.

**Conclusion:** For the presence of air in the hepatic portal vein, the main cause is thought to be the passage of intraluminal gas into the portal system due to mucosal damage, transmural ischemia, bowel distension, and increased intraabdominal pressure particularly in patients with mesenteric ischemia. Intestinal ischemia and necrosis were defined in 75% of patients, ulcerative colitis in 8% of patients, and intraabdominal abscess in 6%. In intestinal obstructions, air in the hepatic portal vein is a rarely encountered condition. Gas in the hepatic portal vein can be viewed through ultrasonography or computed tomography. Clinical and laboratory findings are important in the differential diagnosis and the final diagnosis can be established during surgical procedure. Therefore, it is necessary to make decision quickly and to perform early surgical procedure. In our case, while the leukocyte count above 20.000/mm<sup>3</sup> suggested mesenteric ischemia, normal values of LDH, AST, ALT, and amylase reminded intestinal obstruction. However, the patient was urgently operated because mesenteric ischemia could not be eliminated.

**Keywords:** Portal, venous, air, intestinal, obstructions

## PP-0009 [Emergency Surgery and Trauma]

## A Rare Acute Abdomen Case- Abdominal Cocoon Syndrome

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Abdominal cocoon, sclerosing encapsulating peritonitis (SEP), idiopathic sclerosing peritonitis, and primary sclerosing peritonitis are the definitions generally used for the same disease. SEP is a rarely seen condition characterized by the complete or partial encapsulation of the small bowel with a fibrocollagen membrane, causing some complications such as bleeding, obstruction and perforation, and generally diagnosed intraoperatively. In this case presentation, we aimed to present a patient that was urgently operated due to the findings of mechanical intestinal obstruction and intraoperatively diagnosed with abdominal cocoon.

A 46-year-old male patient was admitted to the emergency unit for the complaints of abdominal pain lasting for two days, nausea, vomiting, and inability to defecate. He had a history of previous pulmonary tuberculosis and no abnormality in the familial history. In the analyses performed at admission to the emergency unit, the value of WBC was found to be 11,400 and there was neutrophil dominance. The urea concentration was evaluated due to decreased oral intake and vomiting and it was found to be elevated (57 mg/dl). His potassium (2,81 mmol/L) and chlorine (88mmol/L) levels were detected to be decreased. The physical examination revealed tenderness and distension in the abdomen. Metallic bowel sounds were auscultated. With nasogastric decompression, an appearance consistent with intestinal content was observed. The PA lung radiography demonstrated calcifications associated with the previous Tbc in the right lung and the direct abdominal radiography in standing position revealed diffuse air-fluid levels in the planes of the small bowel.

The patient, whose physical examination and imaging was consistent with acute abdomen-mechanical intestinal obstruction, was hospitalized for emergency exploration. The patient was operated after receiving written informed consent from him preoperatively. Following the administration of general anesthesia, a midline incision including the areas above and below the umbilicus was performed. It was observed in the exploration that the small intestines were diffusely dilated and the small intestines were completely covered with a membranous formation beginning from approximately 50-cm distance from the Trietz ligament until the terminal ileum and this membrane formed a capsulation. The capsule was dissected and the bands were separated. All small intestines were released and the operation was completed. On the postoperative 4th day, the patient defecated and the nasogastric catheter was removed. The patient was started fluid regimen on the 5th day. Because he tolerated it, it was increased. On the 6th day, intraabdominal drain was removed and the patient was discharged without any problem on the postoperative 8th day. The result of intraoperative exploration was consistent with abdominal cocoon syndrome. In the pathological evaluation of the tissue forming capsulation on the small bowel and being dissected during surgery, mature lymphocytes, plasma cells, and a few reactive mesothelial cells were observed. The results were reported as peritoneal tissues displaying fibrosis, hyalinization, and chronic non-specific inflammation. In conclusion, abdominal cocoon is a rarely encountered condition that is difficult to diagnose preoperatively. It should be considered among the differential diagnoses especially in patients admitted with the findings of mechanical bowel obstruction.

This article was presented as a poster in the 16th Colorectal Surgery Congress (May 16-20, 2017).

**Keywords:** Abdominal cocoon, sclerosing encapsulating peritonitis, mechanical intestinal obstruction, acute abdomen

## PP-0010 [Emergency Surgery and Trauma]

## A Rare Condition Mimicking Acute Appendicitis: Cecal Diverticulitis

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The cecal diverticulum is a rarely seen lesion and clinical symptoms associated with diverticulum perforation or diverticulitis show similar features with acute appendicitis. It is difficult to differentiate it from acute appendicitis through physical examination and radiological imaging techniques are also insufficient to provide data for elimination. Therefore, patients are generally diagnosed intraoperatively. In this case report, we present a patient that was taken into operation for the pre-diagnosis of acute appendicitis and intraoperatively detected to have perforation of cecal diverticulum.

A 25-year-old female patient was admitted to the emergency unit due to the complaints of nausea, vomiting, loss of appetite, and right lower quadrant pain going on for one day. In the analyses, the value of WBC was found to be 14,700 and there was neutrophile dominance. In the abdominal ultrasonography performed in emergency conditions, the appendix vermiformis was observed to be 12 mm at its widest point, its lumen was obliterated, and the wall was thick. There was a finding of diffuse inflammation in the

neighbor mesenterium and the inflammation appeared as surrounded by the mesenterium and bowel loops (plastron?). The patient was hospitalized for operation with the pre-diagnosis of acute appendicitis. She was operated after receiving written informed consent. In the exploration performed with McBurney incision following the administration of general anesthesia, the cecum was observed to be surrounded by the omentum. After the dissection, a 1-cm diverticular perforation was found in the cecum. The cecum was applied primary suture after the excision of the diverticular structure. Then, the appendix was observed to be retrocecal and subserosal and the appendectomy was performed. The patient, who was able to pass gas on the postoperative 3rd day, was started oral regimen, she tolerated it, and oral intake was increased. On the postoperative 5th day, stool discharge occurred. Abdominal drain was removed on the postoperative 6th day and the patient was discharged without any problem.

In conclusion, it is difficult to diagnose cecum diverticulum, which is a rare lesion, preoperatively because its symptoms, findings, and imagings mimic acute appendicitis. If its diagnosis is overlooked, complications with high mortality can develop. For this reason, cecum diverticulum and secondary complications should be considered in the differential diagnoses in patients consulting to the emergency unit with pain in the right lower quadrant.

This paper was presented as a poster in the 16th Colorectal Surgery Congress (May 16-20, 2017).

**Keywords:** Acute abdomen, appendicitis, diverticulitis, cecal diverticulum

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## PP-0011 [Emergency Surgery and Trauma]

# A Case with the Coexistence of Acute Pancreatitis and Acute Appendicitis

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**Introduction:** In patients admitted due to the complaint of abdominal pain, many conditions such as acute pancreatitis, appendicitis, perforation, and urogenital system pathologies should be remembered. More than one pathology can coexist in some patients.

**Case:** A 42-year-old male patient was admitted to the emergency unit due to the complaints of abdominal pain radiating to the back for one week, nausea, and vomiting. In the evaluations, his vital signs were stable. In the physical examination, while tenderness and defense were detected in the right and left upper quadrants in the abdomen, the lower quadrants were normal. The value of WBC was 9400, amylase was 980, and lipase was 1200. In the ultrasonographic examination, the gallbladder was observed to be normal. The abdominal tomography revealed the appendix to be normal. However, the pancreas was reported to be edematous and to have pancreatitis. The patient was hospitalized for the treatment of acute pancreatitis. Because his physical examination findings were not regressed on the 8th day of hospitalization, he was performed control tomography and it was seen that pancreatitis continued and the appendix was also edematous. In laparotomy, it was observed that the appendix was perforated, the small bowel loops were severely dilated, and there was malnutrition in the 30-cm ileum loop. The appendectomy was carried out. The Bogota-bag procedure was applied in order to follow malnutrition. On the postoperative 3rd day, exploration was performed again. It was observed that the nutrition of the small bowel loop was improved and the abdomen was closed. The patient, who developed ileus in the follow-ups, was applied parenteral feeding for 6 days. His amylase and lipase values returned to normal. Ileus condition healed on the 7th day. The patient without any active complaint was discharged on the 10th day with some recommendations.

**Conclusion:** It should be kept in mind that other intraabdominal pathologies can develop in patients that are followed for acute pancreatitis, but show no clinical recovery.

**Keywords:** Abdominal pain, acute pancreatitis, acute appendicitis

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## PP-0012 [Emergency Surgery and Trauma]

# Early Intervention to Invagination in a Patient Diagnosed with Peutz-Jeghers Syndrome

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**Case:** A 23-year-old male patient, who had been diagnosed with Peutz-Jeghers syndrome for about 8 years and followed up, was admitted to the emergency unit due to the complaint of abdominal pain that had started a day before and increased in

the last 4 hours. In his physical examination, distension and tenderness were observed in the abdomen, but no sign of acute abdomen was found. Because of the presence of Peutz-Jeghers syndrome and abdominal pain, intestinal obstruction and invagination were firstly considered in the differential diagnosis. In the direct abdominal radiography in standing position, small bowel loops were observed. A finding defining nested intestines (target sign) was revealed in the abdominal ultrasonography. In the laparotomy, invagination was observed in 3-cm jejunal loop at the distance of 20 cm from the Trietz. It was released in the invaginated loop. There was edema but no sign of ischemia. No additional pathology was observed in the abdomen. The patient was discharged with full recovery on the postoperative 4th day.

**Conclusion:** Peutz-Jeghers syndrome (PJS) is an autosomal dominant inherited pathology characterized by hamartomatous polyps and pigmented mucocutaneous lesions in the gastrointestinal system, particularly in the small bowel, which is a rare cause of jejunal invagination. Although the onset of the disease is generally known to be at the ages of 20s-30s, it is stated to vary depending on the type of genetic mutation.

In patients with PJS, multiple surgical procedures and repeating complications can cause short bowel syndrome and intestinal adhesions. Therefore, treatment methods require being minimally invasive. Surgical and endoscopic techniques should be preferred as complementary methods.

**Keywords:** Surgery, invagination, Peutz- Jeghers syndrome

## PP-0013 [Emergency Surgery and Trauma]

# A Rarely Seen Acute Mechanical Intestinal Obstruction Case: Colonic Endometriosis

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**Objective:** Endometriosis is a disease seen in women at reproductive age and characterized by the growth of the endometrial tissue outside the uterus. Colonic endometriosis can present with the complaints of menstrual cycle-associated pelvic pain, dyspareunia, tenesmus, and painful defecation or it can rarely cause acute mechanical intestinal obstruction. Its gastrointestinal localization was reported at the rate of 3-37% in literature and 7-23% of these cases were stated to have clinical features of acute mechanical intestinal obstruction. In literature, there are a few cases of mechanical obstruction associated with sigmoid endometriosis mimicking colon malignancy. In this study, it was aimed to present a patient detected to have acute mechanical intestinal obstruction developing secondary to colonic endometriosis with literature.

**Case:** A 40-year-old female patient was admitted to the emergency unit for the complaints of diffuse abdominal pain, distension, nausea, vomiting, and inability to defecate. Laboratory analyses demonstrated the value of leukocytosis as 15.100/μL. The intravenous contrast-enhanced abdominal tomography revealed air-fluid levels in the small bowel loops and severe distension in all colonic loops from the sigmoid colon. In the patient planned to be operated, it was observed in the exploration that the sigmoid colon was attached to the uterus as a mass and formed a galo. The adhesions were separated and the resection and Hartmann procedure were applied to the sigmoid colon segment in the appearance of a mass. Pathological examination revealed fibrosis areas in the serosal fat tissue involving the submucosa, muscularis propria, serosal endometrial gland and stroma areas under intact colon mucosa and locally hemosiderin-loaded macrophages. The pathological diagnosis was established as endometriosis.

**Conclusion:** Endometriosis is a gynecologic disease that can affect all organs, particularly ovarium, and its gastrointestinal localization should be kept in mind in the etiology of AMIO, especially in female patients in reproductive period, and the related symptoms should be questioned.

**Keywords:** Endometriosis, ileus, acute mechanical intestinal obstruction

## PP-0014 [Emergency Surgery and Trauma]

# Morgagni Hernia in Adults: Case Report with the Review of Literature

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**Introduction:** Congenital diaphragmatic hernias are rarely seen in adults. However, inability to diagnose or late diagnosis can cause important morbidities. Morgagni hernia (MH) is located in the anterior mediastinum due to the retrosternal localization of the Morgagni foramen, which is defined as an anterior diaphragmatic defect. Most of patients are asymptomatic. MHs in adults are associated with obesity, trauma, or increased intraabdominal pressure.

**Case:** A 60-year-old female patient was admitted to the emergency unit due to the complaints of abdominal pain, abdominal swelling, nausea, vomiting, and inability to defecate lasting for 3 days. In the physical examination, the bowel sounds were hypoactive and there was distension in the abdomen. Defense and rebound were detected particularly in the epigastrium. The ampulla was empty in the rectal examination. In the complete blood analysis, leukocyte count was 17.300 and CRP value was 198. In the radiological evaluation, air-fluid levels were observed in the lower zone of the right lung in the postero-anterior lung graph. In CT, bowel loop compressing on the right lung was viewed in the diaphragm sections. The patient was taken into emergency operation. In the laparotomy, it was observed that the transverse colon and omentum were herniated into the chest from the defect below the xiphoid process in the right side and the colon was partially incarcerated. These structures in the thorax were reduced into the abdomen. The intestinal circulation was observed to return to normal. The hernia sac in the approximately 3-cm defect was excised. This defect in the diaphragm was repaired by using non-absorbable suture material, without mesh. The patient was discharged with full recovery on the postoperative 5th day.

**Conclusion:** In many cases, it has been reported that symptoms are unclear and most of patients are asymptomatic except unapparent epigastric disorders. Respiratory distress, repeating lung infections, and peritonitis picture associated with incarceration can occur in some patients. The risk of complications including gastric volvulus and colon obstruction is quite high. The treatment of MH is performed with surgical techniques. There are different approaches to surgery. Both transthoracic and transabdominal approaches have been defined. In literature, laparoscopic repairs of MH were also defined. Primary closure is generally sufficient for a small defect, but closure with a mesh can be required in the presence of a larger defect.

**Keywords:** Surgery, Morgagni hernia, treatment

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## PP-0015 [Emergency Surgery and Trauma]

# Acute Gastric Volvulus with Bochdalek Hernia: A Rarely Case of Acute Abdomen

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**Introduction:** Gastric volvulus is seen in all age groups, but generally in the elderly population. It is a rare condition that can be life-threatening. Although it occurs as acute, chronic, and acute in chronic base, its chronic form is more frequently seen. The Bochdalek hernias are congenital defects developing in the posterior part of the diaphragm at the levels of 10th and 11th ribs. They are generally rarely encountered in adults. Most of Bochdalek hernias are asymptomatic and they are detected incidentally.

**Case:** A 29-year-old male patient was admitted to the emergency unit for the complaints of abdominal pain and bloating, nausea, and vomiting that lasted for more than 2 days. The physical examination revealed distension and pain in the epigastric region. It was observed that the patient vomited wastes of foods without bile. The value of WBC was increased to 17.000. In the posterior-anterior lung radiography, there was an appearance of soft tissue pushing the lung tissue upward in the left thoracic cavity. The direct abdominal radiography in standing position revealed an appearance with increased diameter and fullness of fluid in the epigastric region. The patient was performed thoracoabdominal CT. In the thoracic CT, the stomach with increased distension was viewed in the thoracic cavity. In the upper abdominal CT, the stomach was observed to be severely expanded and to be full of fluid. The patient was reported to have Bochdalek hernia according to the tomography evaluation. He was urgently operated with open surgical technique. It was observed that he had Bochdalek hernia and organoaxial gastric volvulus. The patient, who was detected to have partial necrosis, was performed resection and diaphragm repair with mesh. The patient was discharged with full recovery on the postoperative 7th day.

**Conclusion:** Delayed diagnosis of acute gastric volvulus can cause ischemia, necrosis, and perforation. These cases can also manifest with gastrointestinal bleeding and septic shock. Mortality can reach to 50% in the cases of gastric volvulus developing necrosis and perforation. Gastric volvulus can be detorsionated through endoscopy or it can be successfully treated with open or laparoscopic surgery.

**Keywords:** Acute abdomen, Bochdalek hernia, gastric volvulus

## PP-0016 [Emergency Surgery and Trauma]

## Acute Mesenteric Ischemia: Our Experiences and Prediction of Additional Resection Need According to the Values of Leukocyte and Lactate in the Second Examination

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**Objective:** Acute mesenteric ischemia (AMI) is still a vascular emergency condition with high mortality and morbidity at present. Despite difficulties in its diagnosis and treatment, this disease is partially successfully dealt with clinical suspect and intervention on time. In this study, 44 patients admitted to the Emergency Unit of İstanbul Education and Research Hospital were evaluated retrospectively.

**Material and Methods:** Forty four patients diagnosed with AMI were examined retrospectively.

**Results:** A total of 44 patients, including 24 female and 20 male individuals, were evaluated. the mean age was found to be 69 years. Of these patients, 28 were performed second-look (SL). Fifteen of these 28 patients was performed additional resection. In the patients undergoing SL, no statistically significant difference was detected between the groups undergoing and not undergoing additional resection in terms of preoperative and postoperative leukocyte values ( $p>0.05$ ). In the group not undergoing additional resection, the postoperative leukocyte value was not significantly different than the preoperative value ( $p>0.05$ ). In the group undergoing additional resection, the postoperative leukocyte value displayed a significant increase compared to the preoperative value ( $p<0.05$ ).

**Conclusion:** The second look in the cases of mesenteric ischemia is a method that is used at the 48th hour. If the increase in the leukocyte and lactate values of patient continues after the first operation, the second look may not be left to be done at the 48th hour for reducing the amount of resection.

**Keywords:** Acute mesenteric ischemia, second look, leukocyte, lactate

## PP-0017 [Emergency Surgery and Trauma]

## A Rare Cause of Free Air in the Abdomen: Pneumomediastinum

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**Introduction:** One of the causes of subdiaphragmatic free air (pneumoperitoneum) is intraabdominal organ perforations and it has indication for laparotomy. The retroperitoneal progress of free air (pneumomediastinum), which occurs in the mediastinum after mechanical trauma or barotrauma (mechanical ventilation, CIBAP, etc), into the abdomen is a cause of pneumoperitoneum. In this study, we evaluated our case that was performed laparotomy due to pneumoperitoneum with literature.

**Case:** A 68-year-old male patient was evaluated in the emergency unit due to the complaints of severe abdominal pain and dyspnea. His abdominal pain had started 4 hours ago and it was continuously felt in all quadrants. He had a history of COPD and HT, but no history of any barotrauma or mechanical trauma. He had a subfebrile fever of 37,4°C, 82% O<sup>2</sup> saturation, and pulse of 110/min. In the physical examination (PE), tenderness and defense were observed in all quadrants in the abdomen. His lung sounds were decreased at the basal region. In the analysis of laboratory parameters, white blood cell Count was 16,700/mm<sup>3</sup>, CRP was 25,55 mg/dl, and other parameters were normal. Direct abdominal radiography in standing position revealed pneumoperitoneum. The patient had consulted to the department of chest diseases for dyspnea one day ago and he had been performed PA-AC radiography, which had not shown pneumoperitoneum. Because vital signs of the patient were not stable, abdominal computed tomography (CT) could not be performed. Laparotomy was planned for the patient because of the pre-diagnosis of intraabdominal organ perforation. Intraabdominal organ perforation was not detected in the laparotomy. The patient was followed as extubated without performing CIBAP in the postoperative period. The department of chest diseases was consulted on the postoperative 1st day and severe emphysema, grade 4 COPD, and pneumomediastinum were detected. The patient, whose vital signs were stable on the postoperative 2nd day, was performed oral contrast-enhanced CT. No gastrointestinal perforation and free fluid was found. He was able to defecate on the same day and he was begun oral intake. The patient developed respiratory failure on the postoperative 7th day and he was accepted as exitus on the same day.

**Discussion:** There are many causes of pneumoperitoneum. Besides intraabdominal organ perforation in its etiology, free air, which occurs after barotrauma or mechanical trauma, progresses towards the retroperitoneum and can provide the image of subdiaphragmatic air. Our patient had no history of any trauma. Different from pneumoperitoneum, intraabdominal organ perforation can produce the picture of acute abdomen in PE and increase the values of white blood cell count and CRP in laboratory analysis. In our case, acute abdomen picture was observed and the values of white blood cell count and CRP were elevated. Laparotomy was planned for the patient because CT, which could rule out pneumoperitoneum, could not be performed due to instable hemodynamics of the patient and PE and Laboratory parameters suggested intraabdominal organ perforation. Non-detection of hollow organ perforation in the laparotomy was attributed to the existent pneumomediastinum as the etiology that might cause pneumoperitoneum.

**Conclusion:** The determination of etiologies that do not require laparotomy in pneumoperitoneum will help to avoid unnecessary surgical interventions. By looking at the principle 'there is no disease, but patient', it can be difficult for clinicians to eliminate the etiology by considering the clinical history, PE, and laboratory parameters of patient, as in our case. Therefore, the picture of pneumomediastinum in pneumoperitoneum should always be kept in mind for revealing the etiology.

**Keywords:** Pneumomediastinum, subdiaphragmatic free air, acute abdomen

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## PP-0018 [Emergency Surgery and Trauma]

# The Coexistence of Meckel's Diverticulum and Acute Appendicitis in a Patient Undergoing Laparotomy with the Diagnosis of Acute Abdomen

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**Introduction:** One of the most common causes of acute abdomen according to the age groups is acute appendicitis and Meckel's diverticulum. The coexistence of these two diseases in the development of acute abdomen picture is a rarely encountered condition. In our study, it was aimed to present a patient diagnosed with acute abdomen and also with acute appendicitis and Meckel's diverticulum.

**Case:** A 26-year-old male patient was admitted to the emergency unit for the complaint of abdominal pain going on for one day. In the physical examination, defense was detected in the right lower quadrant. In the laboratory analyses, white blood cell count (WBC) was 12.4 (x10.e3/uL) and C reactive protein value was 4,27 mg/dl. No pathology was found in the imaging techniques including complete abdominal ultrasound (USG) and computed tomography (CT). Because his symptoms continued in the observation period and the findings of physical examination were in favor of acute abdomen, it was decided to perform laparotomy to the patient. In the laparotomy, advanced-stage inflamed and edematous appendix (appendicitis) was observed in the retrocecal region and there was a picture consistent with inflamed and edematous Meckel's diverticulum (diverticulitis) in the ileum segment in the 40 cm proximal of the cecum (macroscopy and microscopy). The patient was applied appendectomy+diverticulectomy. No complication developed in the peroperative period and the patient was discharged on the postoperative 2nd day. The specimen of the patient was reported as acute appendicitis+Meckel's diverticulum in the pathology laboratory.

**Conclusion:** One of the signs that are important for the diagnosis of acute abdomen is the presence of pathological findings in the abdominal examination. Of the imaging techniques, USG and CT have high specificity and sensitivity in the diagnosis of acute abdomen. In our case, the results of both imaging techniques were interpreted in favor of acute appendicitis or Meckel's diverticulum. Although the coexistence of acute appendicitis and Meckel's diverticulum in a case of acute abdomen is a rarely encountered picture, our patient had both diseases at the same time. For the diagnosis of acute abdomen, the findings of the physical examination should be considered firstly and imaging techniques should be used for supporting the diagnosis. Moreover, in patients undergoing laparotomy due to acute abdomen, it should be kept in mind that acute appendicitis and Meckel's diverticulum may occur simultaneously.

**Keywords:** Meckel's diverticulum, acute appendicitis, acute abdomen

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## PP-0019 [Emergency Surgery and Trauma]

# A Conservative Approach to Omental Infarction: A Rare Cause of Acute Abdomen

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**Introduction:** Omental infarction is a rare condition mimicking acute abdomen and this pathology occurs due to impaired perfusion of the omentum majus. This condition, which is frequently seen in the 4th and 5th decades, can lead to necrosis in the omentum and then abscess and sepsis. Its clinical picture can mimic some pathologies such as acute appendicitis, diverticulitis, and acute cholecystitis. Radiological presence of specific findings in the abdominal tomography (CT) and ultrasonography (USG) facilitates the establishment of diagnosis and reduces the number of unnecessary surgeries. Although omental infarction generally requires surgery, some clinicians claim that conservative treatment can be an alternative to surgical treatment. In this study, we aimed to present a patient that was given conservative treatment for omental infarction with literature.

**Case:** A 66-year-old female patient was admitted to our outpatient clinic for the complaint of abdominal pain going on for 3 days. Her pain was continuous, but accompanied by nausea and vomiting. It was learned from her medical history that she had hypertension for 9 years. The physical examination revealed tenderness and defense in the left lower quadrant of the abdomen. In the laboratory analysis, there was an increase in the white blood cell count (16600/mm<sup>3</sup>) and in the value of c reactive protein (7,99), but no pathology in other parameters. In the CT examination, increased density and heterogeneity were observed in the mesenterium in the neighborhood of the descending colon on the left and these findings were interpreted in favor of omental infarction. The patient was hospitalized in the general surgery clinic with the diagnosis of omental infarction and the findings of physical examination were observed to be regressed in the first 8-hour follow-up of the patient. Therefore, she was planned to undergo conservative treatment. Her symptoms and laboratory parameters improved with the conservative treatment in 3 days and she was discharged.

**Discussion:** Omental infarction is a pathology that occurs due to the rotation of the omentum along its long axis, with unknown primary etiology. It is considered to develop secondary to underlying vascular pathologies, hernias, and hypercoagulopathy. Omental infarction manifests with abdominal pain and nausea, vomiting, and fever can accompany it. In our case, the patient had abdominal pain but no nausea, vomiting, and fever. Omental infarction can mimic acute abdomen with its symptoms in the physical examination. It is diagnosed through CT and USG. In USG, incompressible, heterogeneous, oval, large hyperechoic solid mass lesion at the most sensitive point of the probe is typical. In CT, the appearance of hyperdense ring (ring sign) formed by visceral peritoneum thickened around the mass is typical. In our case, the patient was diagnosed with omental infarction through CT. Because necrosis, abscess, and sepsis can develop after infarction, laparotomy is mostly planned for patients diagnosed with omental infarction and omental portion resection is performed. However, some clinicians have claimed in their clinical case series that this pathology can be resolved by applying conservative treatment. In our study, we found that the picture of omental infarction clinically disappeared with conservative treatment in a patient diagnosed with omental infarction.

**Conclusion:** Omental infarction is a rare pathology that cases the picture of acute abdomen and there is no consensus on its treatment in literature.

**Keywords:** Omental infarction, acute abdomen, conservative treatment

## PP-0020 [Emergency Surgery and Trauma]

# A Rare Cause of Acute Abdomen: Appendiceal Neuroma

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**Introduction:** Acute appendicitis is a clinical picture that includes causes leading to obstruction in the appendix lumen and requiring surgery. In recent years, there have been some studies demonstrating that this picture can occur due to the hyperplasia of neuroendocrine cells in the stroma of the appendix. In this study, we aimed to present our cases undergoing appendectomy due to the pre-diagnosis of appendicitis, which is a rare cause of acute abdomen, and histopathologically diagnosed with appendiceal neuroma.

**Case-1:** A 24-year-old male patient was admitted to the emergency unit for the complaint of abdominal pain for one day. The physical examination revealed tenderness and defense in the right lower quadrant of the abdomen. In the laboratory analyses, white blood cell count was 13000/mm<sup>3</sup> and CRP was 3,2 mg/L. In the ultrasonography of the whole abdomen, increased echo consistent with inflammation was observed in the mesenterium in the right lower quadrant. There was approximately 11 mm thickening and echo loss in the 43-cm segment in the middle of the appendix and an increase in the wall and surrounding vascularity. The mentioned area was incompressible (acute app?). Moreover, several hypoechoic lesions consistent with LAP, the largest of which was 5x5 mm, were detected in the inflamed mesenteric fatty tissue. The patient having the symptoms of acute abdomen was taken into operation with the pre-diagnosis of acute appendicitis. In the examination, the appendix was inflamed and edematous and the patient was performed appendectomy. The patient was discharged with full recovery on the postoperative 1st day. The result of pathological evaluation was reported as appendiceal neuroma.

**Case-2:** A 35-year-old female patient consulted to the emergency unit due to abdominal pain going on for 2 days. Her physical examination demonstrated tenderness, defense, and rebound in the right lower quadrant of the abdomen. In the laboratory analysis of the patient, white blood cell count was found to be 13900/mm<sup>3</sup> and C-reactive protein (CRP) was 19,1 mg/L. No

pathology was detected in the computed tomography of the whole abdomen. The patient with the findings of acute abdomen was taken into operation with the pre-diagnosis of acute appendicitis. The appendix was observed to be inflamed and severely edematous. She was performed appendectomy. She was discharged with full recovery on the postoperative 1st day. The result of pathological evaluation was reported as appendiceal neuroma.

**Case-3:** A 54-year-old female patient was admitted to the emergency unit for the complaints of one-day abdominal pain and loss of appetite. The physical examination revealed tenderness and defense in the right lower quadrant of the abdomen. In her laboratory analysis, white blood cell count was detected to be 16700/mm<sup>3</sup> and CRP was 7,6 mg/L. In the ultrasonography of the whole abdomen, a suspicious dilated tubular structure, the largest point of which was 10 mm, was found in the right lower quadrant (acute app?). The patient was operated with the pre-diagnosis of acute appendicitis. There was phlegmon in the appendix and apendectomy was performed. The patient was discharged with full recovery on the postoperative 1st day. The result of pathological evaluation was reported as appendiceal neuroma.

**Conclusion:** Stromal origin neuroendocrin cells included in the tissue of the appendix increase in number and they obliterate the lumen of the appendix and cause acute appendicitis. The treatment of appendiceal neuroma, which is a rarely seen condition causing acute abdomen, is performed with appendectomy, which is a procedure applied in acute appendicitis. Its final diagnosis is established through histopathological examination and no additional treatment apart from appendectomy is required.

**Keywords:** Acute abdomen, appendiceal neuroma, appendix

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## PP-0021 [Emergency Surgery and Trauma]

# Strategy for Approaching to Liver Traumas: An Analysis of 86 Cases

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The liver is the most commonly injured organ in blunt abdominal traumas and the second most commonly injured organ in penetrating abdominal traumas. The management of liver injuries requiring surgical intervention is challenging even for experienced surgeons because of the complex structure of the liver. In this study, treatment approaches applied in patients with liver trauma were examined.

In this study, the data and results of 86 patients admitted to our hospital for liver trauma between 01.01.2012 and 30.12.2017 were examined. According to them, 67 of the patients (77,9%) were male and 19 (22,09%) were female. Of the patients whose mean age was 34,03 (15-102) years, 49 (56,97) had penetrating trauma and 37 (43,03) had blunt trauma. 39 (45,34%) of these patients were treated non-operatively and an operation was needed in 47 patients (54,65%). When the patients were evaluated according to the organ injury scale, the distributions of liver injuries (according to the AAST criteria) were grade-I in 10 patients, grade-II in 37 patients, grade-III in 23 patients, grade-IV in 8 patients, grade-V in 6 patients, and grade-VI in 2 patients. The grade distributions of non-operatively followed patients were grade-I in 7 patients, grade-II in 19 patients, grade-III in 12 patients, grade-IV in 1 patient, and grade-V in 1 patient. The transfusion of blood products was performed in 54 (61,62%) of the cases. The distributions of surgical techniques in cases requiring an surgical intervention were manual compression in 11 cases, electrocauterization in 3 cases, electrocauterization and omentoplasty in 1 case, electrocauterization and primary suturation in 16 cases, electrocauterization and haemostatic agent in 4 cases, and packing in 12 cases. In the patients requiring surgical intervention, the morbidity rate was 12,7% (6 patients) and the mortality rate was 8,5% (4 patients).

Bleeding spontaneously stops in 50-70% of patients with liver trauma. The follow-up of patients, whose hemodynamic state is stable after liver trauma, with non-operative methods is important because of morbidity and mortality rates caused by early intervention. An operation was not performed in 95,1% of our patients followed by a conservative approach. In hemodynamically unstable patients, taking bleeding under control temporarily with damage control techniques should be kept in mind as an important life-saving choice and the primary procedures in such patients should be for hemostasis and stabilization.

**Keywords:** Liver, blunt trauma, penetrating trauma

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## PP-0022 [Emergency Surgery and Trauma]

# Perforation of Hepatic Hydatid Cyst without the Occurrence of Anaphylaxis

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A 70-year-old male patient was admitted to our emergency unit due to the complaint of abdominal pain developing after falling from height. In his medical history, HT and DM were found, but he had no other comorbid disease. In the examination performed in the emergency unit, diffuse tenderness, defense, and diffuse distension in the abdomen were detected. However, no rebound was observed. In the first analyses, the value of WBC was 12,2, HCT was 39,8, Hb was 12,4, PLT was 210, EOS was 8,83, CRP was 16,3, and INR was 1,84. The contrast agent was given intravenously and abdominal CT was performed. It revealed an appearance of perforated hydatid cyst reaching to the diameter of 80 mm and diffuse fluid in the abdomen. The findings of abdominal examination and general condition of the patient was evaluated and he was taken into operation for treatment.

The preoperative vital signs of the patient were as follows: TA: 110/70, pulse: 86/min, saturation: 98%, and body temperature: 37,7C. The patient was operated. The abdomen was entered with supraumbilical and subumbilical midline incisions. An approximately 1200 cc amount of free fluid was observed and it was aspirated. In the exploration, a 5x6 cm hydatid cyst with a space of 2 cm was detected in the 7th segment of the liver. Then, in the continuation of the exploration, a second hydatid cyst that completely covered the 4th segment and could not be detected in preoperative imagings was found. Both cysts were duly applied cystotomy+omentoplasty. After the operation, the findings of abdominal examination regressed. The values of CRP, leukocyst, and eosinophil were decreased. Because of serous fluids in the drains, the drains were removed. The patient, whose general condition was stable and oral intake returned to normal, was discharged with 800 mg/day albendazole.

**Keywords:** Albendazole, hepatic hydatid cyst, spontaneous rupture.

**PP-0023 [Emergency Surgery and Trauma]****A Rare Complication of Anticoagulant Treatment: Intramural Hematoma of the Small Intestine**

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Non-traumatic intramural hematomas of the small intestine rarely occur in association with anticoagulant therapy. In this study, it was aimed to explain the algorithm of our clinical approach to non-traumatic intramural hematomas of the small intestine associated with excessive anticoagulation and to present long-term outcomes of hospitalized patients.

Medical recordings of patients with spontaneous intramural hematoma of the small intestine were evaluated retrospectively and 16 patients were included in this study. Of these patients, 10 were female and 6 were male. All patients used oral anticoagulants for various cardiovascular and cerebral comorbidities. Their mean age was 77.5±8.4 years (range: 65-95). The common complaints at admission were abdominal pain, vomiting, and weight loss. Ten patients (62.5%) had anemia and 15 patients (93.7%) had leukocytosis. And, increased level of c-reactive protein was observed in all patients. With abdominal computed tomography, all patients were diagnosed with intramural hematoma of the small intestine. Fourteen patients (87.5%) were treated with conservative treatment. Two patients (12.5%) were required operative interventions because their clinical course did not improve. The mean length of hospitalization was 10.25±3.6 days (range: 3-17). Mortality occurred in 2 patients (12.5%).

In patients having abdominal complaints and elevated anticoagulant level, intramural hematoma of the small intestine should be kept in mind. If possible, abdominal computed tomography should be performed in these patients. Accurate and on-time diagnosis provides patients to be treated non-operatively and successfully.

**Keywords:** Anticoagulation, intramural hematoma, small intestine

**PP-0024 [Emergency Surgery and Trauma]****Perforation of jejunal diverticulum: A rare cause of acute abdomen**

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**Introduction:** Jejunal diverticulosis is a quite rare condition and it defines the acquired herniation of small intestinal mucosa areas from the weak segments of the muscularis mucosa layer of the bowel. In examinations with contrast agent, it is viewed at

the rate of 2% and at the mesenteric margin. Although it may cause non-specific symptoms such as abdominal disturbance and pain, patients can stay asymptomatic during their lives. The perforation of diverticulum is rarer and seen especially in the elderly patients. It can lead to the symptoms of acute abdomen and it is diagnosed with contrast-enhanced evaluations and sometimes with peroperative procedures. In this study, it was aimed to present a patient admitted to the emergency unit for the symptoms of acute abdomen with her preoperative and postoperative findings.

**Case:** A 62-year-old female patient was admitted to the emergency unit for the complaint of abdominal pain continuing for the last 16 hours. In her laboratory analysis, the value of CRP was 215 and the value of white blood cell count was 14.000. She had no comorbid disease except peptic ulceration. The abdominal CT revealed 2x2 cm perforation area in the proximal jejunal region and free fluid in the abdomen. Following the preoperative preparation, the patient was taken into emergency surgery. In the peroperative examination, 2x2 cm perforated jejunal diverticulum was observed in the 10 cm distal part of the Treitz ligament. Segmental resection and double-layer end-to-end anastomosis were performed. No postoperative complication was observed and the patient was discharged on the 7th day.

**Conclusion:** Acute abdomen associated with perforated jejunal diverticulum is a rare surgical emergency. Although jejunal diverticulosis can be asymptomatic during lifetime, it can be highly morbid in the occurrence of perforation. As in our case, it is generally encountered in the elderly population. Most of time, segmental resection involving damaged intestinal area and primary anastomosis are curative. Although this condition is rarely seen, the perforation of small intestine diverticulum should be kept in mind particularly in the elderly patients having acute abdomen with chronic dyspeptic complaints.

**Keywords:** Acute abdomen, perforation of diverticulum, jejunal diverticulum

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## PP-0025 [Emergency Surgery and Trauma]

# A Rare Cause of Acute Abdomen: Bowel Obstruction Associated with Acute Appendicitis

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Mechanical bowel obstruction is a cause of diffuse acute abdomen it is resulted from many factors. Acute appendicitis accompanied by paralytic ileus is well-known; however, the case of acute appendicitis with mechanical ileus is very rare and this condition is defined as isolated cases in literature. In this study, two patients admitted to the emergency unit due to abdominal pain and operated with the diagnosis of acute appendicitis-associated ileus were presented with literature.

The first case was a 36-year-old male patient and had the complaints of abdominal swelling, pain, nausea, vomiting, and inability to defecate for 3 days. In the physical examination, the abdomen was distended and tenderness, defense, and rebound were detected in the lower quadrants. The result of rectal examination was normal and approximately 200 cc ileal content was observed in the inserted nasogastric catheter. According to the laboratory analysis, he had leukocytosis (14.000), but no other pathological value. In the direct abdominal radiography in standing position, there was air-fluid level in the small intestine loops. In the abdominal computed tomography (CT) with intravenous opaque agent, which was performed due to undefined clinical findings, a dilatation reaching to 42 mm in the ileal loops was observed and it was evaluated to be consistent with ileus. The patient was operated with the diagnosis of ileus. In the exploration, it was observed that the appendix was inflamed and it was adherent to the bowel loop in the 30 cm proximal region from the ileocecal valve. It was dilated in the proximal region of the small intestine and there was no other pathology. The patient was performed appendectomy and he was discharged without any complication on the postoperative 4th day.

The second case was a 57-year-old male patient and he stated that he had abdominal pain, which had started around the umbilicus one week ago and then located in the right lower quadrant. He also had the complaints of vomiting and abdominal swelling with pain, and inability to defecate for 2 days. The physical examination demonstrated metallic bowel sounds in the lower quadrants and positive defense and rebound. Approximately 300 cc ileal fluid was observed in the inserted nasogastric catheter. Rectal examination revealed no pathology. The computed tomography was performed because of the presence of air-fluid levels in the small intestine loops observed the direct abdominal radiography in standing position and unclear clinical picture. The CT evaluation revealed findings consistent with acute appendicitis with the wall thickness of 18 mm in the medial region of the cecum and dilatation and retention in the distal ileum. In the exploration, the appendix was observed to be acute and inflamed and attached to the small intestine in the 60 cm proximal region from the ileocecal valve. No other pathology was detected. The patient was performed appendectomy and he was discharged without any complication on the postoperative 2nd day.

Mechanical intestinal obstruction is a diffuse acute abdomen resulted from many causes and it requires emergency intervention. Acute appendicitis can be accompanied by bowel distension at various degrees. In general, this distension is a result of bowel paralysis. Moreover, appendix inflammation can rarely cause mechanical intestinal obstruction directly. It is a pre-diagnosis that should definitely be kept in mind in patients admitted for the clinical picture of ileus.

**Keywords:** Acute appendicitis, acute abdomen, intestinal obstruction

## PP-0026 [Emergency Surgery and Trauma]

## Presentation of Two Cases Having Liver and Spleen Laceration after the Insertion of Pleurocan and Tube Thoracostomy

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**Introduction:** A chest tube provides the drainage of the pleural space out of the thorax with the help of a closed drainage catheter through the one-way system. Based on this logic, tube thoracostomy and pleurocan, which is a smaller surgical intervention, are used. These are among the most commonly used surgical procedures in the practice of chest surgery. Although they are safe and easily applicable, they have complications that may result in morbidity and mortality. In this study, it was aimed to present two cases having liver and spleen lacerations after the insertion of pleurocan with literature.

**Case-1:** A 23-year-old female patient was brought to the emergency unit due to extravehicular traffic accident. It was learned from the anamnesis that she had blunt thoracic trauma due to being stuck between the wall and a tractor about one hour ago. In the physical examination, bruise and lacerations were observed on the skin at the level of 10-12th ribs. The patient having normotensive and tachycardic course had superficial but tachypneic respiration. In the blood gas evaluation of the patient, whose hemoglobin value was 9.8 gr/dl, O<sub>2</sub> saturation value was found to be 87%. The patient, whose PA radiography demonstrated pneumothorax in the right lung, was inserted tube thoracostomy by a thoracic surgeon. Because the patient had a fast decrease in Pa values after the procedure and Hgb value in the follow-up was 6.7 g/dl, abdominal CT was performed. It was observed in CT that tube thoracostomy had intraperitoneal localization, caused a full-thickness laceration at the 7th segment of the liver, and located in the thorax by perforating the intraabdominal diaphragm. The patient was taken into emergency surgery. Thoracic tube was removed and the laceration observed in the liver was performed primary repair. Intraabdominal diaphragm was applied full-thickness repair. The thoracic tube was inserted again and the operation was ended.

**Case-2:** A 67-year-old patient that was operated due to the diagnosis of sigmoid colon cancer was inserted pleurocan by a thoracic surgeon due to the observation of left massive pleural effusion on the postoperative 5th day. After this procedure, because of the suspicious trace of pleurocan catheter in the control PA radiography, the patient was performed abdominal CT. In CT, it was observed that the catheter caused laceration in the superior segment of the spleen and drained the thorax by perforating the diaphragm from here. After removing the catheter, pleurocan was repeated from upper level. The patient was followed up because the vital signs were stable and Hgb levels did not decrease. Since no intraabdominal massive fluid was observed in the control abdominal USG and laboratory parameters were stable, the patient was followed non-invasively and discharged with recommendations after the removal of the catheter on the postoperative 10th day.

**Conclusion:** Closed chest drainage catheters are used in pneumothorax, hemothorax, pleural effusion, empyema, cheilothorax, and surgical procedures in which the thoracic cavity is opened. Although the ideal entry point of tube thoracostomy differs depending on the clinics, the area defined as 'safe triangle' behind the pectoralis major muscle, where 3rd and 5th intercostal spaces intersect with the midaxillary line, is mostly preferred. Intraparenchymal, mediastinal, and abdominal tube insertion can lead to some complications such as bleeding, nerve damage, and infection. After the procedure, PA radiography for checking the location and thoracic and abdominal CT in suspected cases are recommended to be performed. The tube can be removed 24 hours after the discontinuation of air leakage, after total expansion of the lungs in the radiography, and after reduction of daily drainage below 100-200 ml.

**Keywords:** Acute abdomen, laceration, pleurocan

## PP-0027 [Emergency Surgery and Trauma]

## A Rarely Seen Foreign Body (Eggplant) Perforation in the Rectum: Case Report

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**Introduction:** Most of foreign bodies in the rectum are sharp or blunt objects pushed into the rectum from the anus. At a lower rate, foreign bodies are swallowed and they progress along the gastrointestinal system but stuck in the rectum. While foreign bodies stuck in

the rectum after oral intake are mostly encountered in people with low intellectual level, mentally disabled and elderly people, thieves, and smugglers, objects pushed from the anus are generally seen as sexual stimuli in middle-aged men. Patients are generally admitted to the emergency unit due to bleeding and pain in the anus. The diagnosis is generally established after taking anamnesis and performing detailed examination. In this study, we aimed to present a patient who consulted to the emergency unit with pain and bleeding in the anus and whose examinations revealed intraabdominal perforation and a foreign body in the rectum with literature.

**Case:** A 45-year-old male patient was admitted to the emergency unit due to the complaints of severe abdominal pain and bleeding after defecation. In the physical examination of the patient, no pathology was detected with the inspection of the anal canal. Hematochezia was found in the digital rectal examination. In the abdominal examination, diffuse tenderness, defense, and rebound were positive in all quadrants of the abdomen, more apparently in the lower quadrants. In the laboratory analysis, the value of WBC was 18900 K/ul and Hgb was at normal interval. In the direct abdominal radiography in standing position, right sub-diaphragmatic free air and an appearance consistent with a foreign body extending to the symphysis pubis in the rectum were observed and it was learned from the anamnesis that the patient penetrated an eggplant into the rectum for sexual gratification. The patient was performed laparotomy based on these findings. In the exploration, an approximately 3 cm full-thickness rectal laceration on the pelvic reflexion and a foreign body (eggplant) were observed. The perforated area was enlarged and the foreign body was removed out of the abdomen. The focus of the perforation was applied primary suturation and the patient was performed protective loop ileostomy. No additional pathology was detected in the follow-up of the patient and he was discharged after scheduling an appointment for the closure of loop ileostomy on a day after 2 months.

**Conclusion:** Rectal injuries are examined under two main groups as intraperitoneal and extraperitoneal injuries. Most of injuries occur in association with blunt and penetrating injuries. Penetrating injuries are mostly encountered in middle-aged homosexual men. Rectal injuries are classified as stage I (hematoma or partial laceration), stage II (laceration less than 50%), stage III (laceration more than 50%), stage IV (full-thickness laceration), and stage V (the presence of devascularized segment). Because adequate anamnesis cannot be taken from patients, the establishment of diagnosis is generally delayed. In the view of a foreign body silhouette in the pelvis in the direct abdominal radiography in standing position, rectal foreign body should be suspected. In cases consulting in early period and not having findings of perforation, if the foreign body is under the rectosigmoid junction, it can be tried to be removed from the anus in the sims or lithotomy position after sedation analgesia. The lesions in more proximal regions should be removed with colonoscopy. Patients whose foreign bodies cannot be removed in 30 minutes or who have the findings of perforation should be performed laparotomy, the foreign body should be pushed into the rectum and then removed from the anus or it should be removed from the perforation area in the abdomen.

**Keywords:** Perforation, rectum, foreign body

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## PP-0028 [Emergency Surgery and Trauma]

# Isolated Ovarian Injury Caused by Penetrating Stab Wound

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The most frequently injured organ in penetrating stab wounds to the abdomen is the small intestine. Up to now, isolated ovarian injury has not been reported.

A 35-year-old female patient was admitted to the emergency unit due to penetrating stab wound to the abdomen. At admission, she was conscious, her arterial blood pressure was 70/40 mmHg, and her pulse was 110/min. The incision involving 3 cm fascia in the infraumbilical region of the abdomen, in which bleeding was going on, was observed. Because the patient was in shock, she was taken into emergency operation. In the exploration, approximately 600 cc hemorrhagic fluid in the pelvic region and penetrating stab wound in the right ovary were found. Hemorrhage was aspirated and all intraabdominal organs were explored. However, no other injury was encountered. Ovarian hemorrhage was stopped with the application of an antihemorrhagic material (Spongostan). The surgery was ended without needing an additional procedure.

While genital organ injury associated with penetrating stab wound has been reported, isolated ovarian injury has not been reported up to now. It should be kept in mind as a rare and interesting condition in trauma cases.

**Keywords:** Ovarian, trauma, shock

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## PP-0029 [Emergency Surgery and Trauma]

# A Rare Cause of Acute Abdomen: Torsion of a Wandering Spleen

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**Introduction:** The spleen is located at the posterior part of the left upper quadrant of the abdomen between the levels of the 9th and 12th thoracic vertebrae in normal people. Wandering spleen generally appears in the presence of a long pedicle allowing movement in the peritoneum. It was firstly defined by Van Horne in 1667 and the development of torsion was presented in 1885. Although the etiology of the wandering spleen is not exactly known, it is associated with congenital or acquired factors. It can rarely be symptomatic due to twisting of splenic vascular structures around themselves. Its occurrence in the pelvis is a rarely encountered condition. It is seen more commonly in women. In this study, a case of wandering spleen with the findings of acute abdomen and pelvic mass was presented.

**Case:** A 20-year-old female patient was admitted to the emergency unit of our hospital due to the complaints of intermittent abdominal pain, nausea, vomiting, and loss of appetite continuing for 3 days. In the clinical examination, moderate abdominal distension and particularly suprapubic tenderness were observed. The body temperature of the patient was 37,5. In the laboratory analyses, the value of hemoglobin was 8.4 g/dl, white blood cell count was  $12 \times 10^3/\mu\text{l}$ , and platelet count was  $903 \times 10^3/\text{L}$ . The result of biochemical evaluation was normal. No abnormality was found in her own medical history and familial history. In the ultrasonography of the patient, the spleen was 17 cm and located in the pelvis. Doppler USG revealed impaired vascularity. Then, computed tomography (CT) was performed and the spleen was observed to have pelvic localization and non-homogenous splenic parenchyma suggested infarction. The abdomen was opened with supraumbilical and subumbilical midline incision. In the exploration, a highly big, congested, and mobile spleen was observed in the pelvis. It was detected that the spleen had no gastrosplenic, splenorenal, splenocolic, and phrenosplenic ligaments and it was freely wandering. The vascular pedicle was very long and twisted around itself. Then, the splenectomy was performed. Because her postoperative period was normal, she was discharged on the postoperative 4th day. The result of pathology was consistent with infarct.

**Conclusion:** Wandering spleen is a rare condition. Although its definite incidence is not known, it constitutes approximately less than 0.2% of reported splenectomy cases. Emergency ultrasonography (USG) performed at the beginning of diagnosis helps by showing the spleen as a mass in the abdomen rather than in its normal location. CT defines anatomical variations better and it can provide quick evaluation of the spleen perfusion. The most important complication of the wandering spleen is the torsion of long vascular peduncle (splenic torsion). The presence of splenomegaly in the wandering spleen should primarily suggest torsion, but this may not occur every time. Various approaches can be preferred for its treatment. While conservative approach is applied in asymptomatic cases, even emergency splenectomy can be performed in symptomatic cases. Acute torsion is very dramatic. Patient has an agonizing pain and peritoneal irritation. Laparotomy and splenectomy are carried out. Wandering spleen, which is seen quite rarely and can present with the picture of acute abdomen, should definitely be considered in the differential diagnosis of cases with the clinical picture of acute abdomen, particularly in the presence of intraabdominal mass finding.

**Keywords:** Wandering spleen, acute abdomen, splenectomy

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## PP-0030 [Emergency Surgery and Trauma]

# A Case of Acute Appendicitis Developing Secondary to Tumor Metastasis

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**Introduction:** The appendix is a blind-ended gastrointestinal organ connected to the cecum with its diameter of 1-3 mm and length of 7-8 cm, which is considered to act as the lymphoid organ in the childhood but to have no important function in the adulthood. Acute appendicitis is a clinical picture that develops in association with lumen obstruction and presents with vascular congestion, inflammation, edema, and bacterial infection. Acute appendicitis is one of the most common diseases encountered in general surgery and requiring surgery. Its most frequent cause is considered to be fecalith obstruction, which is followed by lymphoid tissue hyperplasia, tumors, vegetable and fruit seeds, and intestinal parasites-associated obstructions. In this study, it was aimed to present a patient who was operated due to the diagnosis of bladder adenocarcinoma and developed peritonitis carcinomatosis in the follow-ups and who had the appendix-invasive peritoneal implants that caused acute appendicitis with literature.

**Case:** A 62-year-old male patient was admitted to the emergency unit with the complaints of severe abdominal pain, nausea, and vomiting. It was learned from the anamnesis of the patients that his abdominal pain had started at night and localized in the lower regions in time and nausea and vomiting had occurred in the morning hours. In the physical examination, supraumbilical and subumbilical midline incision scar and urostomy were detected in the patient. It was learned that the patient had undergone radical cystectomy+ileal loop operation for the diagnosis of bladder adenocarcinoma in 2014. In the laboratory analysis of the patient, who had defense and rebound in the right quadrant, the value of WBC was 15900 K/ul and the value of Hgb was in normal range. In the superficial USG, the inside of the appendix could not be visualized because of intraabdominal diffuse acid.

The patient was performed the CT of the whole abdomen. In CT, the appendix was apparent and 16mm dilated. Lesions consistent with intraabdominal peritoneal metastasis and the presence of acid were observed. Based on these findings, the patient was taken into operation. Exploration was performed with Mc-Burney incision. The appendix was detected to be edematous and inflamed and there was a lesion consistent with tumor metastasis in the serosa. The patient, who was performed appendectomy, had no complications in the postoperative follow-ups and he was discharged. The pathological result of the patient was reported as signet-ring cell adenocarcinoma infiltrated from the serosal surface of the appendix and associated acute inflammation.

**Conclusion:** Acute appendicitis is one of the most common conditions requiring emergency surgeries. The risk of this disease is 7% on average in all age groups. This rate is 8,6% in men and 6,7% in women. The most important factor in its etiology is the obstruction of the appendix lumen. Submucosal lymphoid hyperplasia, which is particularly seen in childhood, constitutes 50-60% of the cases. This is followed by fecalith at the rate of 30-35%, fruit seeds, calculus, and parasites at the rate of 4%, and carcinoid tumors, carcinomas, and metastases at the rate of 1%. The obstruction of the lumen causes the accumulation of the fluid in the lumen and the distension of the appendix. Because lymphatic and venous drainage remains insufficient against this increase, bacteria invasion to the wall of the appendix occurs and then arterial circulation impairs, which results in perforation. The anamnesis and physical examination findings of the patient play the most important role in the diagnosis of acute appendicitis. Laboratory analyses and imaging techniques support the diagnosis of acute appendicitis. Mesenteric lymphadenitis, gastroenteritis, gynecological pathologies (mittelschmerz, PID, ovarian cyst rupture, ectopic pregnancy), Meckel's diverticulum, invagination, peptic ulcer perforation, urinary system pathologies, primary peritonitis, Crohn enteritis, diverticulitis, inflammatory bowel diseases, and urinary tract pathologies should be considered in the differential diagnosis. Appendectomy is the standard treatment method for its treatment.

**Keywords:** Acute appendicitis, neobladder, signet-ring cell

## PP-0031 [Emergency Surgery and Trauma]

# Small Bowel Perforation Caused by an Olive Leaf: Case Report

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**Introduction:** One of the most common causes of admission to the emergency unit is abdominal pain. The differential diagnosis should be carefully performed before appendectomy, which is a commonly performed surgery. In our study, a case of swallowing a foreign body clinically mimicking acute appendicitis is presented.

**Case:** A 58-year-old male patient was admitted to the emergency unit due to abdominal pain that had started around the umbilicus two days ago and radiated to the right lower quadrant. No abnormality was found in the medical history of the patient. He had no loss of appetite, nausea, vomiting, dysuria, loss of weight, night sweating, diarrhea, and constipation. He had minimal tenderness in the abdomen and defense in the right lower quadrant. He had no fever. His hemodynamics was stable. In the Laboratory analysis, the value of leukocyte was 15.600/mm<sup>3</sup>, hemoglobin was 14,2 gr/ml, and platelet was 126.000/ml. No abnormality was observed in the direct abdominal radiography in standing position and AC radiography. The ultrasonographic evaluation revealed a suspicion of plastron appendicitis. The CT revealed thickness in the terminal ileal loops, submucosal edema, partial luminal obliteration, a linear lesion suggesting a foreign body in the lumen, and fluid in the anterolateral region of the cecum. With the diagnosis of perforation associated with a foreign body, the abdomen was opened with subumbilical median incision. Microperforation was detected in a mid-jejunal 5-cm edematous segment. There was edema and inflammation in the terminal ileum. Fluid secondary to inflammation was observed around the cecum. The enterotomy was performed for the 3-4 cm solid and fixed foreign body detected in the terminal ileum through palpation. It was found that the foreign body causing the perforation and inflammation was an olive leaf. The enterotomy site and minimally perforated mid-jejunal area were performed primary double-thickness repair procedure. No other pathology was observed in the exploration. No postoperative complication developed and the patient was discharged without any problem.

**Discussion:** Although patients generally heal without any problem in the rarely seen cases of swallowing a foreign body, mortalities have been reported. The outcomes can differ depending on the type of swallowed foreign body, pathologies of the patient, and the timing of the intervention. In literature, foreign bodies such as toothpick, fishbone, chicken or cow bone, and false teeth have been reported. Its clinical findings vary from non-specific abdominal pain to the clinical picture of acute abdomen. The most frightening complications are bleeding and perforation. The region where perforation is mostly observed is the terminal ileum. The development of peritoneal irritation findings following the stage of intraluminal injury occurring until the occurrence of the symptoms explains why appendicitis is suspected in perforations appearing after swallowing foreign bodies. The occurrence of perforation mostly in the terminal ileum is also a factor suggesting acute appendicitis. In our case, subdiaphragmatic free air was not observed in plain radiography in the preoperative period. In literature, the frequency of free air has been reported to be about 16%. In the postoperative inquiry of our case, it was learned that the patient was a farmer and they prepared their meals in the field. According to the probable scenario, he swallowed dried olive leaf while eating food.



**Conclusion:** In conclusion, swallowed foreign bodies can lead to peritoneal irritation and thus acute appendicitis-like clinical pictures. To provide clinically accurate solutions can be possible only with complete anamnesis, careful examination, and proper imaging techniques.

**Keywords:** Appendicitis, perforation, leaf

## PP-0032 [Emergency Surgery and Trauma]

# Kidney Preserving Surgery in a Pediatric Case with Grade 5 Kidney Laceration

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**Introduction:** While renal traumas constitute 1-10% of all traumas, they constitute 50% of urogenital system traumas. Renal trauma is divided into two groups as blunt and penetrating traumas. Blunt trauma occurs due to vehicle accidents and fallings. Penetrating trauma occurs due to gunshot injuries and sharp object injuries. While conservative treatment is applied in hemodynamically stable patients with grade I, II, and III injuries, an operation can be required in grade IV and V cases with impaired hemodynamics. Nephrectomy is usually carried out in Grade 5 cases.

**Case:** An 8-year-old male patient was admitted to the hospital with the complaints of weakness and abdominal pain due to falling from 80 cm-height on his right lumbar region. His blood pressure was 85-42 mm/Hg and pulse was 123/min. The physical examination revealed diffuse tenderness and rebound in the abdomen. In the tomography, grade 5 laceration was detected in the right kidney. He was operated and grade 5 laceration dividing the right kidney into two pieces (as 60% and 40% of the kidney) was detected. It was found that the renal artery and vein were separated into two branches in the hilus and the artery and vein going into the lower and upper poles were intact. Arterial and venous circulation of both pieces were normal. Firstly, renal pelvis and collecting system were repaired and suture was applied over the DJS of the ruptured renal pelvis with 6-0 PDS, and renal pelvis was combined. The kidney parenchyma was repaired over pledgit with 1-0 PDS. The operation was terminated after performing omentopexy on the kidney. Postoperative vascular circulation of the kidney was followed through Doppler USG. The blood supply was reported to be normal. DJS was removed on the 34th day of the kidney repair. In the postoperative 6th month, DMSA and DTPA scintigraphies were performed. The GFR functions of the kidneys were 52 ml/min in the right kidney and 64 ml/min in the left kidney. In the DMSA scintigraphy, split renal function was reported as 44.8% on the right side and 55.2% on the left side.

**Conclusion:** As in all traumas, the approach in renal traumas is to reduce mortality and morbidity and to preserve the organ. In appropriate cases with grade 5 kidney traumas, renography can be performed.

**Keywords:** Kidney preserving surgery, kidney laceration

## PP-0033 [Emergency Surgery and Trauma]

# Tuba uterina in strangulated femoral hernia sac in a pregnant patient

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**Case:** A female patient with 10-month pregnancy was admitted to the emergency unit for the complaints of swelling and pain in the inguinal region. No acute abdomen was observed in the physical examination; however, tenderness was found in the bilateral lower quadrants and strangulated femoral hernia was detected on the right side. In the superficial ultrasonography, a tubular structure was observed in the femoral canal. The hernia sac was firstly opened in the operation and edematous and congested tuba uterina was observed in it. Tuba uterina was kept in warm physiological saline solution. When its color and circulation returned to normal, it was pushed into the abdomen. Femoral hernia was repaired. The preoperative and postoperative opinions of the gynecology and obstetrics department were asked and fetal well-being was evaluated. The patient was discharged with full recovery on the postoperative 2nd day.

**Conclusion:** The incidence of femoral hernia is approximately between 2% and 8% and it occurs in women at a 4-5 times higher rate than men. While it is more commonly seen between the ages of 40 and 70 years, its occurrence is very rare in young people. Although femoral hernia is less common than inguinal hernia, it generally occurs as strangulated and therefore, it can lead to

morbidity and mortality. In literature, a case of pregnant patient with tuba uterina in strangulated femoral hernia sac was not found. We wanted to present our case because it was a rare condition and it would be instructive.

**Keywords:** Femoral hernia, pregnant, incarcerated, tuba uterina

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## PP-0034 [Emergency Surgery and Trauma]

# Development of Abscess Associated with Perforated Appendix in Incarcerated Inguinal Hernia: Delayed Amyand Hernia

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Amyand hernia is a condition in which there is appendicitis in the hernia sac. In this case report, we wanted to present a 36-year-old male patient who was admitted with the findings of incarcerated inguinal hernia and accompanying sepsis one week after being followed for abdominal pain.

Considering right incarcerated inguinal hernia, the patient was planned to be operated. When hernia sac was opened, 500 pc purulent matter and perforated appendicitis were observed. Because of purulent fluid coming out from the abdomen, laparotomy was performed and intraabdominal abscess was drained. Appendectomy was performed and inguinal hernia repair was carried out.

The patient was discharged with full recovery on the postoperative 3rd day.

Amyand hernia is an entity that should be remembered in incarcerated inguinal hernia.

**Keywords:** Amyand hernia, right inguinal hernia, perforated appendicitis

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## PP-0035 [Emergency Surgery and Trauma]

# Our Experience on Solid Organ Injury in Abdominal Traumas

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**Objective:** In general surgery, patients admitted to the emergency unit due to injuries associated with traumas constitute an important majority of emergency patients. In this study, it was aimed to analyze the results of follow-up and treatment approach applied on patients with injuries associated with abdominal traumas retrospectively.

**Material and Methods:** Thirty-five patients consulting to the emergency unit of our hospital due to abdominal trauma between August 2016 and February 2017 were evaluated retrospectively.

**Results:** Of the patients, 28.5% were admitted for gunshot injury, 20% for traffic accident (in-vehicle traffic accident), 40% for penetrating stab wound, and 3.5% for falling from height. Of the patients with abdominal trauma, stomach injury was observed in 2 patients, small bowel injury in 7 patients, large intestine injury in 4 patients, rectal injury in 1 patient, spleen injury in 8 patients, liver injury in 9 patients, kidney injury in 4 patients, bladder injury in 1 patient, thoracic injury in 9 patients, and extremity trauma in 10 patients. Thirteen patients were clinically followed up. One patient was inserted thoracic tube. One patient was performed primary repair of the stomach. One patient was performed primary repair of the stomach+primary repair of the liver. One patient underwent primary repair of the liver. Primary repair +thoracic tube drainage was applied in one patient. Two patients were performed small bowel resection+anastomosis procedure. In one patient, small bowel resection+anastomosis+tube drainage procedure was performed. One patient underwent small bowel resection+anastomosis+primary repair of the colon+loop ileostomy. Primary repair of the aort+primary repair of the small bowel+colon resection+anastomosis was carried out in one patient. The Whipple operation+right nephrectomy was performed in one patient and splenectomy+left nephrectomy in one patient. Splenectomy+thoracic tube drainage was applied in one patient, primary repair of diaphragm in one patient, small bowel resection+ end ileostomy in one patient, small and large bowel resection+end-to-end anastomosis in on epatient, and small bowel resection+anastomosis+primary repair of the colon+loop ileostomy in one patient. Four patients underwent laparotomy. No mortality occurred.

**Conclusion:** Multiple organ injuries can develop after abdominal trauma. While evaluating patients, a multidisciplinary approach should be followed and solid organ injury should always be kept in mind.

**Keywords:** Abdominal trauma, gunshot injury, penetrating stab wound

## PP-0036 [Emergency Surgery and Trauma]

# The Evaluation of Histopathological Results of Patients Undergoing Appendectomy

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**Objective:** Appendectomy is one of the most commonly performed operations in the clinics of general surgery. Although patients are discharged with clinically well-being after operation, its histopathological outcomes can be different from that of acute appendicitis. In this study, it was aimed to examine the histopathological results of our patients who were performed appendectomy.

**Material and Methods:** The files of 655 patients undergoing appendectomy in the Clinic of General Surgery in Celal Bayar University Hospital between 2008 and 2017 were evaluated retrospectively.

**Results:** Of the patients, 260 (39,7%) were female and 395 (60,3%) were male. Their mean age was 34,5 (14-94) years. Appendectomy was performed in 641 of the patients (97,9%), right hemicolectomy and ileotransversostomy in 10 patients (1,5%), partial right colon resection and end ileostomy in one patient (0,2%), and abscess drainage in 3 patients (0,5%). During operation, 547 patients (83,5%) were diagnosed with acute appendicitis, 90 (13,7%) with perforated appendicitis, 9 (1,4%) with plastron appendicitis, 6 (0,9%) with appendix tumor, 1 (0,2%) with pseudomyxoma peritoni, 1 (0,2%) with appendiceal mucocele, and 1 (0,2%) with perforated appendicitis and cecal mass. Three patients could not be performed appendectomy. The operation was ended with abscess drainage.

In the patients undergoing appendectomy, histopathologically normal appendix was detected in 34 (5,2%) patients. According to the pathological reports, 533 (81,7%) acute appendicitis, 66 (10,1%) perforated appendicitis, 14 (2,1%) appendix tumor, 2 (0,3%) plastron appendicitis, 1 (0,2%) endometriosis of the appendix, and 2 (0,3%) mucocele cases were found. A total of 14 appendix tumors were histopathologically classified as 5 (0,8%) neuroendocrine tumors, 4 (0,6%) mucinous neoplasms, 2 (0,3%) adenocarcinomas, 2 (0,3%) sessile serrated adenomas, and 1 (0,2%) carcinoid tumors.

**Conclusion:** Even though acute appendicitis is considered as preoperative and peroperative diagnoses, all appendectomy materials should be sent for routine histopathological evaluation. The possibility of non-acute appendicitis diagnoses and the necessity of pathological reports should be explained to patients. Each surgeon should follow the pathological results of appendectomy materials and contact with patient in the presence of non-appendicitis pathological findings for planning additional treatments.

**Keywords:** Appendectomy, acute appendicitis, histopathology

## PP-0037 [Emergency Surgery and Trauma]

# Small Bowel Prolapse from the Anus: Atypical Presentation of Rectal Perforation

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Non-traumatic rectum perforation is highly rare unless there is an underlying tumoral formation. In this study, we wanted to present a patient admitted to the emergency surgery clinic due to small bowel prolapse from the anus. A X-year-old female patient consulted to the emergency surgery clinic by stating that her intestines protruded from the anus. The patient told that she had rectal prolapsus for 3 years, her anus sometimes protruded and she pushed it inside with her hand; however, she had not received any treatment for prolapsus. No abnormality was detected in the abdominal examination, but small bowel was observed to be prolapsed from the anus in the anal exploration. Without trying reduction, the patient was planned emergency operation due to the pre-diagnosis of rectal perforation. The Hartman's procedure was applied.

The patient was discharged on the postoperative 7th day.

**Keywords:** Rectal prolapsus, small bowel herniation, rectal injury

## PP-0038 [Emergency Surgery and Trauma]

# Lipoma-Associated Invagination which is Rarely Seen in Adults

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**Introduction:** Intussusception is defined as the invagination of an intestinal segment into an adjacent segment. Idiopathic ileocolic intussusception is the most commonly encountered form in children and it can be treated through reduction without surgery. Intussusception is rarely seen in adult population and it occurs in the small bowel more frequently than in the colon. It can present as mechanical intestinal obstruction. Gastrointestinal lipomas are rarely seen benign tumors and they are generally causes obstruction. This study aimed to examine the diagnosis and treatment of a patient with rarely seen lipoma-associated jejunojunal invagination, who was admitted to the emergency unit with the clinical picture of mechanical bowel obstruction.

**Case:** A 67-year-old male patient, who did not have a comorbid disease except BPH and a history of previous abdominal surgery, consulted to the emergency unit with the complaints of abdominal pain, nausea, and vomiting. In the physical examination, apparent tenderness and rebound were observed in the left upper and middle quadrants of the abdomen. A smooth-margined, solid but mobile massive lesion was palpated in the same region. Except the apparent value of leukocytosis, laboratory findings were usual. In the abdominal tomography, an appearance of target sign, which was a finding of invagination at the level of jejunum, was observed and emergency operation was planned. In the abdominal exploration, a polypoid lesion causing invagination in the small intestine loop was detected at the distance of 120 cm from the Treitz ligament. Small bowel resection and side-to-side anastomosis were applied. The complaints of the patient regressed in the postoperative period. He was able to defecate. He tolerated oral intake and he was discharged with full recovery on the postoperative 6th day. The pathological diagnosis of the patient was reported as small intestinal angiolipoma.

**Conclusion:** The occurrence of intussusception in adults is rare and it constitutes less than 5% of all intussusception cases and approximately 1-5% of all bowel obstructions. Different from pediatric intussusceptions which are idiopathic in 90% of cases, an organic lesion exists in 70-90% of adult patients. In adult cases, the disease mostly originates from the small intestine and most of lesions are benign. The most common lesions are Meckel's diverticulum and adhesions. They are followed by lymphoid hyperplasia, lipomas, leiomyomas, hemangiomas, and polyps. Approximately 50% of malignant lesions causing small intestine intussusception are metastatic melanomas. Other malignant intraluminal causes are leiomyosarcomas, adenocarcinomas, GIST, carcinoid tumors, neuroendocrine tumors, and lymphomas. Because of their intramural localizations, lipomas in the small intestine can act as a precursor for intussusception. In adults, it can be difficult to diagnose intussusception due to atypical and episodic symptoms. Early diagnosis with high clinical suspicion and through imaging techniques including USG and tomography is the most important step in the treatment. Once the diagnosis of intussusception is established in adults, its treatment method is surgery. Reduction should be tried and surgery should be performed immediately.

**Keywords:** Invagination, intussusception, small intestine, lipoma

## PP-0039 [Emergency Surgery and Trauma]

# Isolated Biliary Leak Associated with an In-Vehicle Traffic Accident: Case Report

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**Introduction:** In in-vehicle traffic accidents (IVTA), the most frequently injured solid organ due to blunt trauma is the liver and it generally develops in association with clinical blood loss. The cases of isolated biliary leak without impaired vital signs in association with liver laceration are highly rare. In central ruptures related to the bile ducts, a slight increase in the values of serum bilirubin and ALP and hemobilia symptoms such as colic pain develop in 3-4 weeks after the injury. In this study, a case of isolated biliary leak in association with liver laceration after IVTA was presented.

**Case:** The vital signs of the 24-year-old patient brought to the emergency unit after IVTA were stable and the physical examination demonstrated defense and rebound in the abdomen. The laboratory findings were as follows: TB:2,35mg/dl, AST:246U/L, ALT:217U/L, WBC:19100, and Hb:14,6g/dl. The evaluation of abdominal CT was reported as a hypodense area consistent with 27x15 mm laceration in the neighborhood of portal vein anterior and at the level of the caudate lobe of the liver and intrabdominal free fluid. The patient, who had findings of acute abdomen, was performed diagnostic laparoscopy under emergency conditions. Although approximately 500 cc hemorrhagic fluid was detected in the exploration, a hemorrhagic focus could not be found. Therefore, the procedure was switched to open surgery. Hemorrhagic fluid was aspirated and actively bleeding focus

could not be detected. After the insertion of a drain, the operation was terminated. Because defense and rebound were detected in the abdominal examination on the postoperative 1st day and there was bilious contamination in the drain, the patient was re-operated. In the exploration, a little biliary leak from the laceration site at the level of the caudate lobe of the liver was detected without hemorrhage. After drainage and cleaning, a drain was placed and the operation was ended. In the postoperative follow-ups of the patient, biliary drainage, which started approximately as 100 cc/day, gradually decreased, and then finished on the 7th day, was observed. After the removal of the drain, the patient was discharged with full recovery on the postoperative 10th day. No complication developed in the control examinations.

**Conclusion:** Liver traumas are injuries requiring a multidisciplinary approach and having a high morbidity and mortality. Conservative treatment can be successfully applied in well-chosen patients without hollow organ injuries and with stable hemodynamics. Trauma-induced liver lacerations can lead to isolated biliary leak depending on the laceration site and degree. Moreover, it is evaluated that bile peritonitis can cause laparotomies with the findings of acute abdomen in the examination of patient.

**Keywords:** Traffic accident, liver laceration, biliary leak

## PP-0040 [Emergency Surgery and Trauma]

# Colon Perforation Developing Due to Chronic Traumatic Diaphragmatic Hernia

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**Introduction:** Diaphragm rupture is rarely seen. It occurs in about 3% of all abdominal injuries. It usually develops secondary to blunt or penetrating traumas. Diaphragm ruptures caused by stab wounds may not be detected early. Over time, herniations may occur secondary to intraabdominal pressure. In this study, a case of descending colon perforation due to chronic diaphragmatic rupture secondary to trauma was presented.

**Case:** Our patient, who was admitted due to the complaints of abdominal pain, bloating, and inability to defecate, had a history of penetrating stab wound on the left side of the abdomen 4 years ago. In the physical examination, the patient had tenderness in the abdomen but no evidence of acute abdomen. The rectum was detected to be empty in the digital examination of the rectum. In laboratory analyses, the values of hemogram and biochemistry were normal. The value of CRP was detected as 16.6 mg/L. Air-fluid levels at the colonic level were detected in direct abdominal x-ray. In CT, wall thickening at sigmoid colon level, dilated colon loop at the proximal area, and diaphragmatic hernia were observed. Colonoscopy was planned for suspected malignancy in the sigmoid colon. The patient, who had a perforation area at the splenic flexure level in the colonoscopy, was taken into emergency operation. In the exploration, splenic flexure and proximal descending colon were found to be herniated into the diaphragm. The column was removed from the diaphragm. The perforated area was observed at the descending colon level. The thorax was aspirated. There was no stool contamination. The diaphragm was primarily repaired. Resection decision was taken because of the presence of ischemia in the colon. Approximately 10 cm descending colon resection and anastomosis were performed. Thoracic tube was applied and the operation was terminated. The vital signs of the patient were stable during postoperative follow-ups. The patient was discharged on the 7th day when the oral intake was opened and the patient had no additional complaints.

**Conclusion:** Penetrating diaphragmatic injuries develop after stab wounds or gunshot injuries at the level of the lower thorax and upper abdomen. If it is noticed early, it needs to be repaired. Chronic diaphragm rupture usually does not present with symptoms. In the long term, it may cause thoracic herniation of the intraabdominal organs and associated serious complications such as obstruction and perforation. The diagnosis is usually made through thoracoscopy, laparoscopy, or laparotomy after injury. The diagnosis of chronic diaphragm ruptures is difficult. If it causes herniation, it can be detected through imaging techniques such as CT. Surgical repair is necessary when diagnosed.

In conclusion, herniation associated with chronic diaphragm rupture should be kept in mind if patients with the findings of obstruction have a history of a penetrating thoracic or abdominal trauma.

**Keywords:** Diaphragm rupture, colon perforation, penetrating abdominal trauma

## PP-0041 [Emergency Surgery and Trauma]

# The Effect of Mean Platelet Volume and Neutrophile/Lymphocyte Ratio on the Prognosis and Severity of the Disease in Acute Appendicitis Cases

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**Objective:** Acute appendicitis is one of the most common causes of abdominal pain. In this study, it was aimed to investigate the effect of mean platelet volume (MPV) and neutrophile/lymphocyte (N/L) ratio on the severity of the disease.

**Material and Methods:** A total of 113 patients undergoing appendectomy in Adnan Menderes University, Faculty of Medicine, Department of General Surgery between December 2014 and September 2016 were included in the study. Considering the values of MPV and N/L ratio, the correlation between histopathological values and macroscopic findings was evaluated.

**Results:** A total of 113 patients were included. While perforation was not detected in 91 (80,5%) cases, it was found in 22 (19,5%) cases. The histopathological findings were interpreted as acute appendicitis in 99 (87,6%) patients, lymphoidhyperplasia in 7(6,2%) patients, and phlegmonous appendicitis in 7 (6,2%) patients. No statistically significant difference was found between the MPV and N/L values and macroscopic and histopathological values.

**Conclusion:** While N/L ratio is thought to be important for determining the severity of acute appendicitis, the parameter of MPV is not considered to have a such importance.

**Keywords:** Acute appendicitis, MPV, N/L

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PP-0042 [Emergency Surgery and Trauma]

## Is There Seasonal Variation in the Incidence of Acute Appendicitis?

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**Objective:** Many studies conducted in recent years have shown that acute medical diseases do not occur randomly in time, but they develop at specific times of a day and in specific months of the year at higher rates. The aim of this study was to investigate the observable possibility of seasonal variation in the onset of acute appendicitis (AA).

**Material and Methods:** A total of 686 patients operated due to the pre-diagnosis of AA in Ankara Numune Education and Research Hospital in 2015 were considered for the study, but 651 of them who were histopathologically confirmed to have AA were analyzed. The patients were divided into sub-groups according to their genders, ages, and time of surgery. By using t-test for statistical analyses, the relationship between the seasons and the incidence of acute appendicitis was investigated.

**Results:** Of the patients followed and treated for the pre-diagnosis of AA in 2015, 56% were male and 44% were female. The rate of AA was higher in men than in women by 12%. The number of patients whose pre-diagnosis of AA was confirmed by the result of pathological evaluation was 651. This demonstrates that 95% of patients hospitalized and operated due to the pre-diagnosis of AA are those with AA. According to the analyses of data, AA is 12% more common in men than in women. In the classification of 651 cases (15-83 years old) into successive groups involving 6 years, the number of AA patients at the age range of 22-28 years was the highest and this rate constituted 27.9% of the total number. This rate gradually decreased in the groups at the ages of  $\geq 22$  years and decreases to 0.6% for the age of 78 years and above. The number of AA cases was 123 (18.9%) in winter, 179 in spring (27.5%), 187 (28.7%) in summer, and 162 (24.9%) in autumn. In spring, the number of AA patients increased approximately by 9% compared to winter. In summer, its incidence increased approximately by 1% compared to spring. Acute appendicitis cases were observed to be more common in summer but less common in winter. Considering the value of  $p=0.001$  ( $<0.05$ ), a statistically significant difference was found in the number of patients with AA among the seasons. When the operations performed at the same period were classified according to the days of a week, it was found that these operations were mostly carried out on Thursdays, at the rate of 16.4%. Moreover, the numbers of operations on Fridays and Sundays was higher than on the other days.

**Conclusion:** Our data support some studies showing that the incidence of acute appendicitis is low in winter and it increases in summer. Although some authors have suggested that this can be associated with seasonal viral, bacterial, and parasitary infections, the causes of this phenomenon are still unclear.

**Keywords:** Appendicitis, appendectomy, seasonal variations

## PP-0043 [Emergency Surgery and Trauma]

# The Importance of the Differentiation of Intraabdominal Free Air in the Presence of Chilaiditi's Syndrome

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In the presence of gastrointestinal perforation, intraabdominal free air is an important finding that helps the diagnosis of perforation with direct radiography and abdominal rigidity. In cases in which intraabdominal free air is not so apparent, computed tomography can provide more data or the differentiation of a condition such as Chilaiditi's syndrome can be made. Chilaiditi's syndrome is a rarely symptomatic condition in which the colon or small bowel is located between the liver and diaphragm and it is important to remember and diagnose it in order to avoid unnecessary laparotomies. In this case report, stomach perforation encountered in a patient with Chilaiditi's syndrome was discussed. A 20-year-old male patient was admitted to the emergency unit due to the complaint of abdominal pain. The patient, who had no apparent findings of peritoneal irritation in the first examination and who was reported to have Chilaiditi's syndrome according to iv contrast-enhanced computed tomography, was hospitalized in the surgical clinic for acute abdomen. Rigidity was detected in the follow-ups of the patient and his tomography was consulted to the department of interventional radiology. The presence of minimal free air was detected around the falciform ligament. The patient was performed laparotomy. Repair procedure was carried out with Graham mesh due to prepyloric ulcer perforation. No problem developed in the postoperative follow-ups. This case emphasizes that the differentiation of intraabdominal free air can sometimes be difficult in the presence of acute abdomen in patients with Chilaiditi's syndrome and it is essential to monitor patient closely and to re-evaluate or repeat the images when necessary for accurate diagnosis and treatment.

**Keywords:** Acute abdomen, Chilaiditi's syndrome, intraabdominal free air

## PP-0044 [Emergency Surgery and Trauma]

# A Rare Cause of Acute Abdomen: Omental Bleeding after Coronary Angiography

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**Introduction:** After arterial interventions, some complications such as bleeding and hematoma can occur. In this study, a patient who developed acute abdomen symptoms after percutaneous femoral artery intervention due to coronary angiography and who was detected to have omental bleeding in the exploration was presented.

**Case:** A 43-year-old male patient, who was performed stent application with angiography due to inferior myocardial infarction in the Department of Cardiology, was consulted to our department for diffuse abdominal pain that developed after the procedure. He had diffuse tenderness and defense in the abdominal examination. Free abdominal fluid was observed in the computed tomography. Contrast agent extravasation was detected in the left iliac fossa. Because his vital signs were unstable in the follow-ups, it was thought that active bleeding continued and the patient was taken into emergency operation. In the exploration, approximately 1700 cc partially coagulated hemorrhagic fluid was aspirated in the abdomen. A 10x10 cm hematoma was detected in the omentum in the left iliac fossa. This region was partially resected. No other abdominal pathology was found. The operation was ended after doing bleeding control. The patient had no postoperative problem. Thereupon, he was discharged.

**Conclusion:** After percutaneous vascular interventions, some complications including bleeding, perforation, and hematoma can develop. Hemodynamically stable patients should be followed conservatively. However, complications causing serious morbidity and mortality can sometimes develop. In this study, omental injury, which is not commonly encountered after percutaneous vascular intervention, was detected. In the detection of hematoma in the abdomen through imaging techniques after interventional vascular procedures, it should be remembered that, although rare, omental injury can develop.

**Keywords:** Acute abdomen, bleeding, omentum, vascular intervention

## PP-0045 [Emergency Surgery and Trauma]

# A Rare Cause of Acute Abdomen: Gastrointestinal Stromal Tumor Perforation

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**Introduction:** Gastrointestinal stromal tumors are the most common mesenchymal tumors of the gastrointestinal system. Although many patients are asymptomatic, patients may come with an abdominal mass, abdominal pain, and bleeding. While 10-30% of patients are incidentally encountered during laparotomy and endoscopy or imaging techniques, 15-50% of patients come with a metastatic disease. These patients very rarely present with acute abdomen findings due to tumor perforation. This article discusses a case of gastrointestinal tumor perforation, admitted to the emergency unit due to severe abdominal pain.

**Case:** A 35-year-old female patient was admitted to the emergency unit with severe abdominal pain, nausea, and vomiting that started an hour ago. In the physical examination of the patient, her body temperature was 38.2 °C, pulse was 110/min, respiratory rate was 24/min, and BP was 90/60 mm Hg. In the abdominal examination, diffuse tenderness, defense and rebound were found. In the laboratory analyses, the value of white blood cell count was 13.600/mm<sup>3</sup>, hemoglobin was 9.7 g/dL, HTC was 30.5%, PLT was 337.000 mm<sup>3</sup>, and CRP was 1,6 mg/L. The results of biochemical tests were normal. Abdominal tomography showed extensive free fluid and air in the abdomen, and an approximately 10 cm tumoral lesion at the jejunum level. The patient was taken into an urgent surgery. In the exploration, diffuse free fluid in the abdomen and a 10 cm sized tumoral mass perforation at approximately 20 cm distal to the Trietz ligament were detected. Segmental small intestine resection and end-to-end anastomosis were performed. In the histopathological examination of the taken sample, a small intestine gastrointestinal stromal tumor was found. The patient had a problem-free postoperative period and was discharged on the postoperative 7th day.

**Conclusion:** Gastrointestinal tumors are frequently seen in the stomach (60-70%) but less in the small bowel (20-30%), colon and rectum (5%), and esophagus (below 5%). Seventy percent of the patients are asymptomatic. Because GISTs tend to grow into the spaces instead of invading neighbor organs, they can reach very large dimensions and may not give any signs until this period. Depending on their locations, they may give symptoms (dysphagia, obstructive jaundice, small bowel obstruction, etc). Their clinical manifestations are usually abdominal pain, bleeding, and obstruction findings. However, symptoms related to tumor perforation are very rare. In the literature review, 15 cases of GIST tumor perforation were reported up to 2017. The most reported clinical findings are bleeding and obstruction. Up to now, 3 types of perforation have been described: Closed perforation with abscess (abscess type), perforation with bleeding in the tumor (hemoperitoneum type), and perforation fistulated into the digestive system in association with central tumor necrosis (bowel perforation type). Abdominal pain is the most common symptom. Although abdominal pain is more common in stomach-originated GIST, the symptoms of acute abdomen are more frequent in jejunal and ileal GIST.

**Keywords:** Acute abdomen, gastrointestinal stromal tumor, perforation

## PP-0046 [Emergency Surgery and Trauma]

# A Rare Cause of Spontaneous Small Intestine Peforation: Fungal Infections

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**Introduction:** Fungal infections, which are rarely seen in spontaneous multiple small intestine perforations, should be kept in mind due to antifungal therapy in the treatment strategy.

**Case:** A 40-year-old female patient was hospitalized due to diarrhea, high white blood cell count, and fever symptoms by the Department of Infectious Diseases for investigating the etiology of fever. On the 2nd day of the hospitalization, she was consulted to our department because abdominal pain developed in addition to existent findings. When the patient was evaluated, no known comorbid disease or drug use was detected. In the anamnesis, no history was found except the use of chia seed 3 days ago. The value of WBC was 28,000 and CRP was 210. The results of biochemistry parameters were normal. No pathology was observed in the blood samples and stool test. Laparotomy decision was made because free air values in the abdomen were detected in radiological imaging performed due to the presence of acute abdomen findings in the physical examination. In the intraoperative exploration, multiple perforations with ulcerated bases were observed starting from 130 cm distal to the Treitz



ligament. The 120-cm intestine loop in unrepairable condition was resected. Approximately 15-20 perforation sites at the distal part were repaired. Postoperative broad spectrum antibiotic therapy was initiated by the Department of Infectious Diseases. The departments of Infectious Diseases and Rheumatology were consulted and the patient was started to be examined by these departments. Because of the intestinal contents coming from the abdominal drain on the postoperative 4th day, re-laparotomy was performed. New perforation areas were seen in the exploration. The perforated areas were repaired and the operation was terminated with Bogota Bag. Peripheral TPN was started to the patient. Antifungal therapy was added to the antibiotic treatment with the consultation of the Department of Infectious Diseases. After the re-laparotomy, the patient was reoperated on the postoperative 2nd day and 1-2 perforation sites were also repaired. The abdomen was closed with drainage systems. Postoperative follow-up was continued. The patient was switched to central TPN because of prolonged oral intake. During this time, the patient's cultures were retaken upon the arrival of the pathological report of the 120-cm bowel loop resected in the first operation, as 'infectious small bowel material consistent with fungal hyphae which cannot be definitely diagnosed and made typing'. After re-consultation of the patient by the Department of Infectious Diseases, her antifungal treatment was regulated. The patient, whose infectious parameters completely regressed in the follow-ups, had no content in the drains on the postoperative 10th day after the last operation and she was gradually started a regimen. No pathology was detected in the advanced examinations required by the Departments of Rheumatology and Infectious Diseases. The patient was discharged after 4 weeks of antibiotic therapy.

**Conclusion:** Non-traumatic small bowel perforations are one of the very rare clinical manifestations. Some of them are intra-operatively detected. Apart from benign and malignant masses, inflammatory diseases, systemic diseases, and infectious diseases constitute the etiology. Of infectious causes, tuberculosis, brucella, and salmonella infections are the first preliminary diagnoses remembered by almost every clinician. We wanted to remind you that fungal infections are one of the reasons for spontaneous small bowel perforation because of treatment strategies.

**Keywords:** Small intestine, perforation, fungal infections

## PP-0047 [Emergency Surgery and Trauma]

# The Mechanism of Internal Herniation: Postoperative Adhesions

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**Introduction:** Small bowel obstruction (SBO) is an important and serious pathology requiring emergency surgery. We present a patient with the pre-diagnosis of SBO secondary to the previous surgery through clinical findings and direct abdominal radiography in standing position and having thrombosis in the superior mesenteric artery (SMA) and in the right renal artery in the abdominal computed tomography (CT). This case is important because the adhesions in the small intestines caused internal herniation (IH).

**Case:** A 47-year-old male patient was admitted to our emergency department with the complaints of abdominal swelling, inability to defecate, nausea, vomiting, and abdominal pain. The pains continuing for the last 3-4 days had caused him to consult to the emergency unit in İzmir for the first time and he had been told that he had to be operated. In the last 2 days, the complaints of vomiting and inability to defecate were added to the clinical picture. He had a history of laparotomy conducted with a median incision. It was not possible to provide any information and documentation on the reason of this operation. Physical examination showed moderate distension in the abdomen. Rectal examination revealed no pathological finding and the rectum was empty. In laboratory examinations, the value of hematocrit was 39.9%, hemoglobin was 13.9 g/dl, and leukocyte was 9700/mm<sup>3</sup>. Air-fluid levels were observed in the direct abdominal radiography in standing position. In the abdominal CT, thrombus was observed in SMA and beginning of the right renal artery. The DSA angiography performed by the interventional radiology department revealed that SMA was recanalized from the collateral vascular structures at a few centimeters distal area to the thrombus. The therapeutic procedure was unsuccessful. Based on the current picture, laparotomy decision was taken. Intraoperatively, dilated small intestine had adhesions on its own in many places, there was no ischemia. Similar adhesions in the lower right quadrant caused internal herniation. The adhesions were resolved and the mechanism causing the hernia was removed.

**Discussion:** Adhesions are the most common cause of small bowel obstruction. They mostly occur secondary to a previous abdominal surgery. An adhesion band cannot be clearly visualized by CT. The elimination of other pathologies is necessary for the diagnosis of bride ileus in CT. On the other hand, about 5% of bowel obstructions are caused by internal hernias. Its preoperative diagnosis is difficult and other possible simultaneous pathologies may lead the physician to misdiagnose. Likewise, the observation of thrombus in the superior mesenteric artery in a case followed up for ileus and the disproportionate relation of severe abdominal pain with the findings in the physical examination put the diagnosis of bride ileus in the shade.

**Conclusion:** Ileus secondary to postoperative adhesions is a commonly encountered picture in emergency surgery clinics. However, internal hernia is a rare pathology and the rate of its preoperative diagnosis is low. The appearance of these pathologies on the ground of mesenteric thrombosis is noteworthy. For this reason, clinicians should evaluate the cases as a whole and be alert.

**Keywords:** Internal herniation, postoperative adhesions, superior mesenteric arterial thrombosis

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## PP-0048 [Emergency Surgery and Trauma]

# A Rare Cause of Abdominal Pain: Rectus Sheath Hematoma

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**Introduction:** Rectus sheath hematoma (RSH) is one of the rare causes of acute abdomen, which is characterized by sudden onset of abdominal pain associated with bleeding developing from the epigastric veins or rectus muscle. Most of patients have a history of anticoagulant or antiaggregant therapy. In this study, we share our experience on a case followed up in our center due to rectus sheath hematoma.

**Case:** In the physical examination of a 46-year-old female patient who was admitted to the emergency unit for the sudden onset of abdominal pain after carrying heavy things, her hemodynamics was stable and there were apparent defense and findings of a palpable mass in the left lower quadrant. The patient had a history of warfarin usage for cardiac valve replacement. In the laboratory analysis, the value of hemoglobin was (Hgb) 10.2 gr/dl and the value of INR was 2.9. An appearance consistent with 4x3 cm hematoma was detected in the lower part of the left rectus muscle in the computed tomography. Warfarin therapy was ceased and vitamin K was given and fresh frozen plasma replacement was applied. In the follow-up, her hemodynamics was not impaired, Hgb level was stable, and no expansion was observed in the hematoma in the examination and ultrasonography performed for control. The patient was discharged on the 4th day with low molecular weight heparin therapy.

**Conclusion:** RSH is a pathology that mostly regresses with conservative treatments. In cases with impaired hemodynamics, interventional procedures such as surgery and angiographic embolization can be required for bleeding control. RSH should be kept in mind among the causes of acute abdomen particularly in patients receiving anticoagulant or antiaggregant therapy.

**Keywords:** Rectus sheath, hematoma, warfarin

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## PP-0049 [Emergency Surgery and Trauma]

# Acute Abdomen, Ileus, and Spontaneous Omental Torsion in a Young Patient

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**Introduction:** Omental torsion is a pathology causing omental circulation impairment that develops due to the clockwise rotation of the omentum around its long axis and accordingly, leading to hemorrhagic extravasation, necrosis, and adhesions. Patients are often operated due to the diagnosis of acute abdomen, and the diagnosis is often established intraoperatively. In this study, it was aimed to present a young patient having atypical omental torsion that started suddenly and caused ileus and then necrosis.

**Case:** A 20-year-old male patient had been admitted to the emergency unit in an external center with the complaints of abdominal pain, nausea, and vomiting about 2 days ago. His physical examination had revealed diffuse abdominal pain, rebound suspicion and negative defense. Firstly, the patient had been planned to be performed examinations with the pre-diagnosis of acute appendicitis. The results of laboratory analyses and abdominal USG had been evaluated to be normal. The patient applied to our hospital voluntarily. It was learned from his anamnesis that he had inability to defecate for about 3 days and diffuse pain. His abdominal distension and nausea-vomiting gradually increased. He had no history of a previous surgery. Air-fluid levels were observed in the direct abdominal radiography in standing position and iv oral contrast-enhanced CT was performed. Because of the continuation of the air fluid levels and additionally the deterioration of the general condition in approximately 24 hours after the patient was admitted to our emergency clinic with ileus+acute abdomen pre-diagnosis, the patient was operated. In the exploration, all small intestines were dilated. Approximately 500 cc serohemorrhagic fluid was found in the abdomen. It was observed that the ileum segment at approximately 15 cm proximal area from the ileocecal valve was located in the pelvic area and passage to the distal area was completely blocked from this region where torsioned necrotic omental tissue was completely adhered. In addition, it was observed that the intestinal segment approximately 100 cm away from Trietz ligament was

adhered to the same region. Necrotic omental tissue was excised. The small intestinal segment was healthy and its viability was normal. No perforated area was seen. The small intestines were evacuated from the distal area towards the proximal area and approximately 3500 cc nasogastric catheter was aspirated. Serosal repairs were performed on two different points on the intestinal surface and the operation was terminated. On the postoperative 4th day, the patient was able to defecate. The patient was discharged without any complication.

**Conclusion:** Primary omental torsion is a rare cause of acute abdomen. It is difficult to diagnose it before surgery. The diagnosis is usually made in the surgery. It should be known that spontaneous omental torsion may also cause acute abdomen and ileus in patients who do not have a history of previous surgery and who are followed up with the pre-diagnosis of acute abdomen and ileus. It should be remembered in preoperative diagnosis by considering the absence or mildness of gastrointestinal symptoms, time of its onset, and findings of physical examination. We think that it is important to well evaluate the patient in early period and to make the surgical decision on time.

**Keywords:** Young patient, omental torsion, ileus

## PP-0050 [Emergency Surgery and Trauma]

# Small Intestine Perforation Associated with Fecalith: A Video Case Report

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**Introduction:** Fecalith-induced perforation is a rare cause of intestinal perforations. Fecalith causes pressure on the intestinal wall and thus ischemic necrosis that results in perforation. Because the presence of chronic constipation complaints causes delayed diagnosis and treatment, the mortality rates are high in fecalith-induced intestinal perforations.

**Case:** It was learned that an 80-year-old female patient was admitted to the emergency unit due to the discontinuation of urine output, intubated in the emergency room, and performed abdominal computed tomography. The laboratory values were as follows: Glucose: 189 mg/dL, urea: 156 ng/mL, creatinine: 4.83 mg/dL, amylase: 177U/L, albumin: 2.36 g/dL, total bilirubin: 1.51 mg/dL, direct bilirubin: 0.85 mg/dL, calcium: 7.8 mg/dL, Na: 133 mmol/L, chlorine: 85.7 mmol/L, CRP: 418 mg/L, troponin: 57.3 pg/mL, white blood cell count:  $3.11 \times 10^9/L$ , hemoglobin: 10.7 g/dL, and pH: 7.10. In the radiological imagings, findings consistent with intraabdominal free fluid, diffuse symmetric wall thickening in the small intestine segments, and air fluid levels in the intestinal segments were observed. In addition, the patient underwent urgent surgery due to the appearance of free air foci with enlargement of the left intrahepatic bile ducts and intraabdominal free air in the anterior part of the liver in the neighborhood of the stomach, and suspicion of perforation. The seriousness of the patient's condition, the suspicion of perforation, and the possibility of sepsis and the loss of the patient were explained in detail to the relatives of the patient. The relatives of the patient stated that the patient had undergone endoscopic retrograde cholangiography (ERCP) for choledocholithiasis a year ago, but cholecystectomy had not been performed. It was learned that the patient had a known heart failure and hypertension. In the exploration, extensive stool contamination was seen in the abdomen. A jejunal perforation associated with fecalith was found at the 100 cm distal area from the Treitz ligament. The perforated small intestine segment was resected with the help of linear staplers. The proximal small intestine loop was removed from the skin and anastomosis from the jejunal loop was opened. Despite inotropic support with norepinephrine, iv hydration, and iv antibiotic therapy with ceftriaxone and metronidazole, the patient died due to multiple organ failure and cardiac arrest developing after septic shock on the postoperative 1st day.

**Conclusion:** Severely hardened stool pieces can lead to intestinal obstruction and perforation. For this reason, in order to prevent constipation and fecalith formation in bed-dependent patients, the patients should be moved in the bed by turning to the left and right frequently. Moreover, the use of neuroleptic and anticholinergic agents, which may lead to constipation, should be avoided.

**Keywords:** Fecalith, constipation, small intestine, perforation

## PP-0051 [Emergency Surgery and Trauma]

# Peptic Ulcer Perforation: Should we be Afraid?

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**Objective:** Peptic ulcer perforation is the most common cause of emergency surgery among the gastroduodenal ulcer complications, but also presents as a serious surgical emergency due to morbidity/mortality developing in association

with secondary peritonitis and sepsis. In our study, surgical procedures performed due to the pre-diagnosis of peptic ulcer perforation in the Department of General Surgery, YYU Medical Faculty between 2010 and 2018 years were evaluated retrospectively.

**Material and Methods:** In the Department of General Surgery, YYU Medical Faculty between February 2010 and February 2018, 99 patients with the pre-diagnosis of peptic ulcer perforation were operated. Patients' ages, the surgical techniques applied to the cases, the perforation diameters and localizations of the cases, the diagnoses of pathological specimens taken during the surgery, the total length of hospitalization (intensive care unit and clinic), and mortality rate were evaluated retrospectively.

**Results:** Of the 99 patients who underwent surgery for peptic ulcer perforation, 12 patients were excluded from the study because of inadequate retrospective data. The mean age of the 87 cases evaluated was  $45.6 \pm 18.6$  (15-84 years). There were 77 male and 10 female patients (M:F=7,7: 1). In 63 of the cases, the Graham's simple closure technique (primary suture + omentoplasty) was performed with a classic midline incision. Laparoscopic Graham's simple closure procedure (primary suture + omentoplasty) was applied to 14 of the cases. Seven of the cases were started laparoscopic surgery and the Graham's simple closure method (primary suture + omentoplasty) was applied with classical midline incision. The operation of one patient was started laparoscopically and continued with classical midline incision and applied distal subtotal gastrectomy. One patient was performed distal subtotal gastrectomy with direct classical midline incision. Another patient was applied only diagnostic laparotomy with classical midline incision without surgery for perforation because the patient was exitus in the operation. The perforation diameters of the cases were  $0.72 \pm 0.68$  mm (ranging from 3 mm to 40 mm). When we examined perforation localizations, prepyloric perforation was observed in 64 patients, postpyloric perforation in 17 patients, minor curvatura perforation in 4 patients, major curvature perforation in 1 patient, and perforation at the posterior of the stomach corpus in 1 patient. In the examination of the pathological specimens of the cases, biopsy was not collected in the perforation areas of 57 patients because they were young and a benign nature was considered in the intraoperative view. In the pathology of the cases, 10 had only inflammation, 16 had ulceration, 3 had *Helicobacter pylori* positivity in addition to inflammation. In one of the patients, the taken pathology was evaluated to be normal. The mean duration of hospitalization was  $7.95 \pm 7.57$  days (ranging from 0 to 63 days). The number of patients diagnosed with peptic ulcer perforation but died during the intraoperative period or during the postoperative follow-ups was 7. The mortality rate was 8%.

**Conclusion:** While peptic ulcer perforation is an emergency surgical condition that should be feared because its late diagnosis can lead to serious morbidity/mortality, it should be remembered that it is a disease that is not frightening, in fact, because it is life-saving with extremely easy methods such as Graham's simple closure technique.

**Keywords:** Peptic ulcer, perforation, Graham's simple closure

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## PP-0052 [Emergency Surgery and Trauma]

# Spontaneous Esophageal Rupture Performed Thoracotomy and Endoscopic Stent

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**Introduction:** Spontaneous esophageal rupture is one of the rare clinical entities. It requires urgent treatment and is mostly mortal. In this presentation, we aimed to introduce a case which could be intervened 2 days after the perforation.

**Case:** A 61-year-old male patient presented with the chest pain and shortness of breath to the nearest emergency department. It was learned in the anamnesis that he vomitted after a heavy meal two days ago. The physical examination revealed crepitation in the cervical region. In the laboratory tests, CRP is measured as 435 mg/l, WBC as 9800 u/l, Na as 128 mmol/l, urea as 87 mg/dl, and creatinine as 1.4 mg/dl. In the computed tomography (CT) of the neck and thorax, emphysema in the mediastinum and in the fatty tissue in the right cervical region and the enlargement in the lower part of the esophagus were remarkable. The patient with the pre-diagnosis of pneumomediastinum was referred to our hospital. His general condition was moderate, tachycardic, and tachypneic. Oral contrast-enhanced neck and thorax CT was performed. It was observed that the oral contrast agent passed out of the esophagus at subcarinal distance. The esophageal rupture was diagnosed. Considering the time that passed over the rupture, it was decided to place a stent in the esophagus with endoscopy. Simultaneous thoracotomy with endoscopy was planned. In the exploration performed with right posterolateral thoracotomy, gray-yellow color change in the mediastinal pleura, infected fluid in the pleural space, and a collection below the mediastinal pleura were observed. The mediastinal pleura was opened from the apex to the diaphragm. The infected debris tissues were cleaned and washed with physiological saline solution including betadine. An approximately 3 cm perforation was detected just below the Azygos vein in the esophagus. It was thought that primary sutures would not be beneficial because of severely infected and inflamed surrounding tissues. An endoscope was inserted and two 7 cm covered stents

were placed into the approximately 3 cm longitudinal defect at the 30 cm distance to the esophagus. It was observed from the open mediastinum that the defect was closed with the stent. Nasogastric catheter was inserted. The intercostal muscle flap was prepared on the perforation area and fixated to this area. Two 32f thoracic drains were placed in the thorax cavity. The patient was followed up as intubated after the operation. Daily pleural lavage was performed from thoracic tubes. The patient was extubated on the postoperative 6th day. On the postoperative 10th day, the nasogastric catheter was removed. Esophagus-stomach-duodenum graphy showed no leakage in the esophagus. Regime 1 was started. On the postoperative 12th day, the regime 2 was initiated. Thoracic tubes in the apex and basal were removed on the postoperative 13th and 14th days, respectively. On the postoperative 15th day, the patient developed respiratory distress, cyanosis, and hypotension and he was intubated. He was exitus due to multiorgan failure on the postoperative 27th day.

**Conclusion:** Esophageal rupture should also be considered in the etiology of pneumomediastinum. It should be kept in mind that thoracotomy-guided endoscopic stenting can be performed in cases with high risks such as increased perforation area due to cutting the wound lips of primary repair suturation for treatment and excessive narrowing after suturation.

**Keywords:** Endoscopic stent, pneumomediastinum, spontaneous esophageal rupture

## PP-0053 [Emergency Surgery and Trauma]

# Acute Appendicitis in A Patient with Partial Situs Inversus Performed Laparotomy Due to the Prediagnosis of Sigmoid Diverticulitis

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**Introduction:** The situs inversus is roughly regarded as a translocation of the organs in mirror form. In the total situs inversus, all of body organs are displaced. In partial, isolated situs inversus, one or several organs are displaced. In these patients, no significant malformation anomalies or organ dysfunction is observed despite the displacement of the organs. It shows autosomal recessive genetic transition. The patients continue their normal lives and there is no significant difference between them and normal people due to mortality. In this study, we aimed to present the case of acute appendicitis with partial situs inversus in the light of the literature.

**Case:** A 52-year-old male patient was admitted to the emergency unit with a complaint of pain in the left lower quadrant. It was learned from his anamnesis that he had been admitted to another health institution due to the same complaints and his treatment had been planned with the pre-diagnosis of sigmoid diverticulitis. In the physical examination of the patient, who consulted to our hospital due to the absence of regression in his complaints, tenderness, defense, and rebound were found to be positive in the left lower quadrant. The value of Wbc was 13700K/ul and Hgb was within normal range in routine laboratory evaluation. In the superficial USG of the patient who had no apparent pathology on the PA radiography, a finding consistent with acute appendicitis was detected in the left lower quadrant. Therefore, the patient was performed abdominal tomography and it revealed situs inversus of the intraabdominal organs and the cecum was in the left quadrant. An operation was scheduled for the patient because the appendiceal lumen was occluded and there was a contamination in the surrounding tissue mesentery. Laparotomy was performed with a mini-subumbilical median incision in the patient considered to have partial situs inversus. In the exploration, it was observed that the cecum was located in the left quadrant of the abdomen and the appendix was inflamed and edematous. Based on these findings, appendectomy was performed. The patient who had no early and late complications in the postoperative follow-ups was discharged with the suggestions.

**Conclusion:** Late or confused diagnosis of acute appendicitis, which has an important place among the causes of acute abdomen, can lead to unwanted complications. The most important factor affecting mortality and morbidity is the delay and confusion of the diagnosis. Pregnancy, urinary system diseases, lymphatic adenitis, and gastroenteritis have a significant role in late diagnosis. Situs inversus has a relatively low incidence. The incidence of situs inversus, which is more common in males, is between 1/5000 and 1/20000. The translocation of all thoracic and abdominal organs is called total situs inversus and the translocation of isolated abdominal or thoracic organs is called partial or isolated situs inversus. The abdominal situs inversus occurs due to the rotation of the embryonic middle intestine for 270° clockwise rather than 270° counterclockwise. Malrotation varies depending on the abnormalities in the degree and direction of the rotation.

**Keywords:** Acute appendicitis, diverticulitis, situs inversus

## PP-0054 [Emergency Surgery and Trauma]

# Ovarian Tumor Rupture Developing after a Minor Trauma: Case Report

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**Introduction:** Spontaneous ruptures of gynecologic tumors, especially teratomas, into the abdomen or adjacent organs (small intestines, colon, and rectum) have been rarely reported in the literature. On the other hand, ruptures of gynecologic epithelial tumors are a much rarely encountered condition. According to our research, our case is the first case in the English literature in terms of the type and diameter of the tumor, its development due to minor trauma, and its causing hypovolemic shock due to hemorrhage.

**Case:** A 69-year-old female patient with the complaints of acute abdominal pain and brain fog that developed after falling down while walking was admitted to the emergency unit of our hospital. It was detected in the physical examination that her general health condition was poor, she had confused consciousness, and she was non-cooperative. Her BP was 40/20 mmHg and pulse was 121/min. The hemoglobin value of the patient was 6.7 g/dl (14-18 g/dl). After applying fluid resuscitation, emergency abdominal tomography was performed. It showed intraabdominal diffuse hemorrhagic free fluid and a mass lesion filling the right quadrant of the abdomen and extending to the left quadrant, with the widest axial size of 15x21 cm and the highest craniocaudal length of 27,5 cm. With these findings, the patient was taken into emergency surgery. At the operation, approximately 1800 ml hemorrhagic fluid was detected in the abdomen, the anterior wall of the mass lesion containing the cystic components of about 30x20x15 cm in diameter originating from the right ovary was completely ruptured longitudinally and the hemorrhagic foci were seen in the ruptured areas. Hemostasis was achieved in the bleeding areas and the mass was totally removed. The patient, who had an uneventful postoperative period, was discharged with full recovery on the 6th day. In the measurements of the tumor performed after the resection, its diameter was detected to be 29.5x19x14.5 cm and its weight was measured as 3.750 grams. The pathological evaluation revealed that the tumor was malignant ovarian epithelial tumor.

**Conclusion:** Ruptures of epithelial ovarian tumors are a relatively rare condition and it has been reported that they generally develop due to manipulations during surgery. In the literature, the cause of rupture is usually pregnancy in cases where spontaneous rupture of these tumors is reported. Gynecologic tumor rupture occurring due to minor trauma is a highly rarely encountered event. The treatment for the cases of bleeding and acute abdomen associated with gynecologic tumor ruptures is surgery. The gold standard in surgical treatment is tumor excision.

**Keywords:** Minor trauma, ovarian tumor, rupture, hypovolemic shock

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## PP-0055 [Emergency Surgery and Trauma]

# A Rare Cause of Acute Abdomen; Perinephric Abscess: Case Report

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**Introduction:** Nephritic and perinephric abscesses are one of the major clinical problems encountered in hospitalized patients with the incidence of 1-10 per 10000 and its incidence in men and women is approximately the same. These abscesses, which are generally confined within the Gerota's fascia and treated with conservative methods such as antibiotic therapy and percutaneous drainage according to their diameters, can lead to flank, scrotal, subphrenic abscesses and occasionally colonic fistulas. Our case is one of rare cases because perinephric abscess crosses the Gerota's fascia and opens into the abdomen, which causes secondary peritonitis.

**Case:** A 41-year-old female patient with the complaints of abdominal pain, bloating, fever, and fatigue was admitted to the emergency unit of our hospital. The patient, whose pain was continuing for the last one week and increased in the last two days, only had a history of type 1 diabetes. In his physical examination, he had severe distension in the abdomen and diffuse tenderness, defense, and rebound in all quadrants, especially in the left upper and lower quadrant. In the emergency abdominal tomography, an approximately 129x114 mm air-containing abscess surrounding the left kidney and having margins that were clearly selected from the left kidney, pushing the left kidney towards the antero-inferior region, and having septa and the findings of peritonitis were observed.

The patient was taken into emergency surgery. In the exploration, it was observed that the 20x15 cm abscess in the left kidney lodge opened from the Gerota's fascia into the abdomen, there was diffuse purulent fluid in the pelvic, perihepatic, perisplenic, and right lower quadrant, and the omentum was edematous. The patient, who underwent abscess drainage and peritoneal lavage, was reoperated on the postoperative 1st day because of purulent fluid coming out from the drains and she was applied abscess drainage and peritoneal lavage again. Her follow-up continued in the intensive care unit. On the postoperative 6th day, the patient was extubated and weaned from the ventilator. She was discharged from the intensive care unit and hospitalized in the clinic on the postoperative 9th day. On the 20th postoperative day, the patient was discharged from hospital with full recovery.

**Conclusion:** Nephritic and perinephritic abscesses are one of the clinical problems that result from lower urinary tract infections' reaching the kidney. They often develop due to gram (-) bacteria. Urinary obstruction and diabetes are two major risk factors. These abscesses, which are generally restricted in the Gerota's fascia and treated with percutaneous drainage after early diagnosis, rarely open into the abdomen. In these situations, laparotomy is life-saving. In late cases, as in our patient, these abscesses can cause clinical problems with high morbidity and mortality, such as peritonitis associated with their abdominal opening.

**Keywords:** Perinephric abscess, peritonitis, acute abdomen

## PP-0056 [Emergency Surgery and Trauma]

# A Rarely Seen Systemic Lupus Erythematosus Complication: Spontaneous Spleen Rupture

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**Introduction:** Non-traumatic rupture in the spleen is extremely rare and it has been associated as an unusual event in SLE patients. There are a few cases reported in the literature. Since there is no history of trauma in these cases, the diagnosis may be overlooked or delayed. In this study, we wanted to share a case undergoing urgent splenectomy.

**Case:** A 39-year-old female patient having known diagnoses of systemic lupus erythematosus (SLE), hypothyroidism, glaucoma, and asthma and using Levotiron and Hydroxychloroquine, who was admitted to the emergency unit due to pain in the left upper quadrant for several times in the last two weeks was brought to the emergency surgery region with syncope. The patient whose hemoglobin value was 4.9 was hypotensive. In the abdominal ultrasonography performed urgently, a 125x29 mm subcapsular hematoma in the spleen in which splenomegaly was defined and a collection consistent with diffuse hemorrhagia reaching the size of 18 cm in the perisplenic area in the pelvic region were observed. In the abdominal tomography that could be performed in normotensive state with aggressive crystalloid replacement, splenomegaly, thrombosis in the splenic vein in addition to the appearance confirming the suspicion of spontaneous spleen rupture, and areas with restricted perfusion in the left kidney were observed. In the patient undergoing emergency splenectomy, there was diffuse hemoperitoneum which appeared to be originated from ruptured spleen. In the control ultrasonography performed in the postoperative follow-up, a 12 mm solid lesion (hemangioma?) in the right lobe of the liver and portal and inferior caval vein detected. There was no feature on the blood peripheral smear. In the gastroscopy applied for portal hypertension, candidiasis was observed from the middle to the distal area of the esophagus. The patient was initiated Fluconazole therapy. No varices were observed. During the process, the patient was leukopenic and the values of CRP and INR were 230 and 4,68, respectively. Warfarin was discontinued. After the vaccination against encapsulated bacteria and the initiation of Prednisolone therapy, her one-month clinical and laboratory course was good. Then, mental fog and weakness on the left side developed and she was performed cranial tomography. It revealed diffuse parenchymal edema in the brain, sulcal effacement, and sinus venous thrombosis. This was followed by the development of brain edema. Thrombocytopenia was not detected. The patient was diagnosed with autoimmune hemolytic anemia that responded to steroid for 6 months in 2010 and received high-dose steroid treatment in 2013 with the diagnosis of SLE. No immunosuppressive treatment was given. In the same period, thyroid ultrasonography (hypothyroidism was reported in the rate of 10% in SLE) demonstrated right jugular venous thrombosis and warfarin was started. In the evaluation of genetic susceptibility to thrombosis by antiphospholipid antibody and lupus anticoagulant screening, no specificity was detected. In the immunologic tests performed to search for paroxysmal nocturnal hemoglobinuria clone due to thrombosis in atypical places and antiphospholipid antibody negativity, no abnormality was found. In the intensive care under the supervision of neurology, hematology and rheumatology, the patient's Glasgow Coma Scale was 15/15 and she was oriented and cooperative. Significant vascular lesions were not reported in the pathological evaluation, but infarct was defined.

**Conclusion:** Spontaneous splenic rupture is a very rare SLE complication. Due to the presence of antiphospholipid antibodies, spontaneous splenic rupture occurs in association with the spleen infarct, vasculitis, and idiopathic spasms in some others. It can rarely occur on the ground of an infiltrative disease such as lymphoma. Although the cause is unknown, male gender is dominant in traumatic or spontaneous splenic rupture in reported cases. While the time of the event is close the the time of diagnosis in the reported in splenic rupture cases with SLE, the time between the diagnosis and the event was 4 years in our case. In the hypothesis for the etiology, white pulp atrophy accompanying to congestion in the red pulp as well as immunological stimulation is suspected.

**Keywords:** Spleen, lupus, rupture

## PP-0057 [Emergency Surgery and Trauma]

# Isolated Small Intestine Perforation Occurring Late after Blunt Abdominal Trauma: Case Report

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**Introduction:** Immediately after abdominal blunt trauma, abdominal physical examination findings may be unclear. The absence of any pathology in the first abdominal physical examination performed after blunt trauma may lead the clinician to misjudge the severity of the damage caused by blunt trauma. In addition, the first radiological findings of blunt trauma patients may be misleading.

**Case:** A 17-year-old male patient was admitted to emergency service due to increased abdominal pain after blunt abdominal trauma. It was learned that the patient knocked against a car with his bicycle at 8:00 am and the patient's abdomen hit the car's bumper. It was also learned that the patient consulted to the emergency service after the accident and no pathology was detected on abdominal computed tomography (CT) examination carried out at 8:25 am, so that the patient was discharged from the emergency unit. In the blood analyses of the patient, the value of white blood cell count was  $8.07 \times 10^9/l$  and hemoglobin was 16.4 g/dl. On the same day, his abdominal pain increased and the patient was re-admitted to the emergency unit. In the oral+intravenous contrast-enhanced abdominal CT that was performed at 22:31 in the evening, mild-moderate level of free fluid was observed in both paracolic areas, but more apparently on the right side, in the perihepatic and perisplenic regions. The density of free fluid in the paracolic area on the right side was apparently increased. There were suspected extravasation appearances at the level of ascending colon on the right side and this finding was considered to be significant for small intestine perforation. Moreover, mild-moderate level free fluid was observed in the pelvis and both paracolic areas. Besides that, no contrast agent passage was seen into the colon segments and this finding was stated to be significant in terms of small bowel perforation. His physical examination revealed extensive defense, rebound, and tenderness in the abdomen. In the laboratory tests, white blood cell count was  $16.58 \times 10^9/l$  and hemoglobin was 17 g/dl. The patient underwent urgent operation with the pre-diagnoses of intraabdominal hemorrhage and small intestine perforation. In the exploration, intraabdominal diffuse free fluid was observed (small bowel contents). Culture was taken from the fluid and sent for analysis. A 2 cm perforation area was seen in the small intestine segment, fitting the jejunum at 70 cm from the ligament of Treitz. The defect was repaired by continuous interlocking suture. No pathology was detected in other intraabdominal organs. The patient was applied abdominal lavage. Methylene blue was administered to the patient through the nasogastric tube. No leak was detected. The patient was discharged on the 7th postoperative day.

**Conclusion:** 75% of blunt abdominal traumas are seen after traffic accidents. The small intestines are the most damaged organ after the liver and spleen after blunt abdominal trauma. However, when the intestines are damaged, there are usually other organ injuries accompanying this damage. In the medical literature, there are a few reported cases of isolated small intestinal perforation developing late after a blunt abdominal trauma. Physical examination findings after blunt trauma and radiological imaging techniques can be inadequate to establish definite diagnosis. Keeping patients under observation after blunt trauma is essential for the early intervention of complications that may occur over time.

**Keywords:** Small intestine, blunt, perforation, tomography, trauma

## PP-0058 [Emergency Surgery and Trauma]

# A 3-Year Analysis of Emergency Consultation and Surgeries in the Department of General Surgery in A Tertiary Care Training and Research Hospital

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**Objective:** To share the distribution of the consultations to the Department of General Surgery by the emergency units in our hospital and performed interventions.



**Material and Methods:** Retrospective evaluation of the records of the patients who were examined in the emergency unit between January 2015 and December 2017 and requested to be consulted to the Department of General Surgery and retrospective analysis of the admission type, following procedures, and their results.

**Results:** The number of patients who were consulted to the Department of General Surgery by the emergency outpatient clinics and services was 44114. The mean number of consultations per month was  $1225,4 \pm 49,5$  in 36 months and the mean number of operations per month was  $117,1 \pm 3,1$ . In 1033 (2,3%) of these patients with indications, emergency endoscopy was performed in the first 12 hours of admission and 4217 (9,5%) were operated after the evaluation. Of the patients taken into operation, while 3935 (93.3%) were operated due to acute surgical abdomen, 223 patients (5.2%) underwent surgery due to trauma. Thirty-three patients (0.7%) were operated for gastrointestinal system bleeding continuing after the first intervention. On the other hand, 26 patients (0.6%) were operated due to necrotizing fasciitis. While the most common reason for operation was acute appendicitis for patients with acute surgical abdomen ( $n=2353$ ; 55.7%), it was penetrating stab wounds for patients with trauma ( $n=111$ ; 2,6%). The rate of laparoscopic surgery in appendicitis cases was 95.8% ( $n=2255$ ). During this period, 385 patients were operated for acute cholecystitis. The number of cases undergoing laparoscopic procedure was 376 (97.6%). In patients who underwent cholecystectomy, it was not switched to open surgery, partial cholecystectomy was performed in 5 cases (1.3%). In cases of peptic ulcer perforation, the operations of 100 patients (55.6%) were completed laparoscopically. In diagnostic laparoscopies performed for left thoracoabdominal injuries in trauma cases, diaphragmatic injuries were also detected in 24 patients ( $n=47$ ). In 17 (70.8%) of these patients, in whom no other intraabdominal pathology requiring to switch to open surgery was detected, laparoscopic repair of the diaphragm was performed. 3793 (89.9%) of 4217 surgeries were performed by the resident doctors under the supervision of a specialist physician.

**Conclusion:** In our clinic, which is one of several hospitals with the highest number of General Surgery consultations and surgeries per month in İstanbul, laparoscopy facilities are used at advanced levels in emergency surgical interventions and resident training is in first place under all conditions.

**Keywords:** Acute abdomen, trauma, emergency surgery, laparoscopy

## PP-0059 [Emergency Surgery and Trauma]

# The Use of Hem-o-Lok Clip and Intracorporeal Suture in Laparoscopic Appendectomy

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**Objective:** In patients presenting with the complaint of abdominal pain to the emergency unit, acute appendicitis is the most common abdominal pathology requiring urgent surgical intervention. The standard surgical treatment is open appendectomy. However, with developing technology at present, laparoscopic appendectomy has advantages such as shorter hospitalization time, less pain, early return to work, and better cosmetic results as well as disadvantages such as higher cost, longer operation time, and higher rate of intraabdominal abscess development, compared to open appendectomy. With the spread of laparoscopic appendectomy in the treatment of acute appendicitis; it is still unclear which of the techniques is the most appropriate intervention for the closure of the appendectomy stump. At present, various surgical techniques such as the use of stapler, hem-o-lok clip, titanium clip, and ligature, use of bipolar cautery, pushing the knot made externally into the abdomen, and lasso technique are frequently used. In this study, we evaluated the demographic characteristics of the cases undergoing laparoscopic appendectomy due to the diagnosis of acute appendicitis at Tepecik Education and Research Hospital Department of General Surgery between 2017 and 2018, the techniques of hem-o-lok clip and intracorporeal knotting in terms of the duration of operation and postoperative complications and also the superiority of these methods to each other.

**Material and Methods:** The patients who was hospitalized and performed laparoscopic appendectomy in the General Surgery Department of Tepecik Training and Research Hospital between 2017 and 2018 due to the diagnosis of acute appendicitis were evaluated retrospectively. The study included 129 patients. Gender of the patients, techniques used during operation, duration of operation, duration of hospitalization, and postoperative complication rates were evaluated.

**Results:** Between the years of 2017 and 2018, 129 patients were operated laparoscopically. The study included 129 patients. Of them, 74 (57.4%) were female and 55 (42.6%) were male. In 10 patients (7.75%) (6 males, 4 females), laparoscopy was switched to open surgery because of technical insufficiency and patients' inability to tolerate increased intraabdominal pressure. The age range was 17-73 years and the mean age was 35.8 years. Six patients were over 60 years of age and they were postoperatively followed up in the surgical intensive care unit for at least one day due to their comorbid diseases. Knotting was used in all patients whose operation was switched from laparoscopic to open appendectomy and hem-o-lok or knotting was used in patients whose operations ended laparoscopically. In two patients who underwent laparoscopic appendectomy, postoperative intraabdominal abscess and trocar-site hernia developed as morbidity (1.55%). Intraabdominal abscess developed in one patient performed in-

tracorporeal knotting and incarcerated hernia developed in the subumbilical trocar-site in a patient for whom clip was used. Clip was used in 70 patients (54.27%) and intracorporeal silk suture was used in 59 patients (45.73%). The mean duration of operation was 81.25 min and this time was 75.6 minutes in the patients for whom clip was used. The mean duration of postoperative hospitalization was 1.95 days, which was found to be 1,89 days for patients applied clipping and 2,05 days for patients applied intracorporeal knotting.

**Conclusion:** In laparoscopic appendectomy, the durations of operation and hospitalization are longer in patients for whom clips are used than in those for whom intracorporeal knotting is used.

**Keywords:** Laparoscopic appendectomy, hem-o-lok clip, intracorporeal knotting

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## PP-0060 [Emergency Surgery and Trauma]

# The Results of Incomplete Early Intervention After Corrosive Substance Intake

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The intake of a corrosive substance causes rapid, progressive, and severe burns in the upper gastrointestinal system. This clinical picture is called corrosive esophagitis. If the acute phase of the injury is overcome, esophageal stricture or malignancy may develop during the healing process. The concentration and pH of the caustic substance, the amount received, and the duration of contact with the mucosa are important in corrosive esophagitis. A 33-year-old male patient diagnosed with bipolar disorder had been suspected of suicide attempt by drinking hydrochloric acid and he had been taken to the emergency unit of an external center by his family with a complaint of abdominal pain. Emergency intervention had been made and the gastric lavage and activated charcoal had been administered. There was not enough information about the examination performed by general surgery at the external center, and the patient, who had been discharged after the process without hospitalization, had had mental fog and syncope at home after one hour. He was re-admitted to the emergency unit. Emergency surgery was planned with the suspicion of intestinal perforation, but because there was no empty bed in the intensive care unit, he was referred to our hospital. The patient who was referred to our department was taken into emergency operation and performed laparotomy. All intraabdominal organs were observed to be necrotized. The patient was applied total gastrectomy, total pancreatectomy, total small intestine resection, subtotal large intestine resection, and splenectomy and packing was performed. The patient died due to multiorgan failure on the postoperative 2nd day. In cases of corrosive substance ingestion, endoscopic evaluation should be performed within the first 24 hours. If there is haemorrhage, erosion, pale-atrophic mucosa, and necrosis in the stomach mucosa in the endoscopic findings, the patient should be followed closely for perforation. In this regard, complications can be avoided and mortality rates can be reduced.

**Keywords:** Corrosive, stomach, perforation

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## PP-0061 [Emergency Surgery and Trauma]

# Acute Appendicitis in the Elderly Patients: Evaluation of the Diagnostic Values of Alvarado Score and Computed Tomography

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**Objective:** Acute appendicitis is one of the most common causes of acute abdomen in emergency surgery clinics. While acute appendicitis occurs primarily in young people with a life-time risk of 7%, 5-10% of cases are the elderly patients. Forty-eight operated patients aged  $\geq 70$  years were retrospectively evaluated in order to assess the reliability of computed tomography (CT) and the Alvarado score in the diagnosis of acute appendicitis.

**Material and Method:** Forty-eight patients aged  $\geq 70$  years, who were operated with the prediagnosis of acute appendicitis and whose histopathological diagnosis was reported as acute appendicitis between January 2016 and January 2018, were retrospectively evaluated. In addition to the demographic data of the patients, the diagnostic values of the Alvarado score and CT in the normal population were compared with the results of the patients who were operated in our clinic. We assessed whether the

diagnoses of leukocytosis, pain in the right lower quadrant, fever, pain radiation, loss of appetite, vomiting, rebound, tenderness, and shift of neutrophil count to the left in the Alvarado score and the findings of the computerized tomography were consistent with postoperative histopathological diagnoses.

**Results:** Of the patients histopathologically diagnosed with acute appendicitis in our clinic, 60.4% were male and 39.6% were female and the mean age was  $76.7 \pm 5.8$  years. In the Alvarado scores, pain localization had the lowest diagnostic value with the rate of 56.3%, the diagnostic value of the shift of the neutrophil count to the left was the highest with the rate of 93.8%. When the Alvarado scores of  $>7$  were considered as suspicious for the diagnosis of acute appendicitis, the diagnostic value for the score range of 1-6 was 23%, this value was 85.4% in the score range of 7-10. This rate in CT was 91.6%.

**Conclusion:** The incidence of appendix perforation is 17-40%. In elderly patients, this rate can reach up to 70%. Therefore, it is important to diagnose acute appendicitis in elderly patients. The Alvarado scoring and CT are benefited in the establishment of its diagnosis. When the diagnostic value of Alvarado score is examined, diagnostic power of scoring differs in studies in literature. However, the values of  $>7$  in the scoring system increase the sensitivity in the diagnosis. While the diagnostic power in normal population was reported to be 30% for the scores of 1-4 and 66% for the scores of 5-6 in the study of Alvarado et al., it was 24.6% for the scores of  $<7$  in our study. This rate was 93% for the score of 7 and above in the study of Alvarado et al., but 85.4% in our study. CT is often used as an auxiliary diagnostic technique in the diagnosis of acute appendicitis. In the recent studies, the sensitivity and specificity of CT scans are reported as 87-100% and 83-98%, respectively. The sensitivity in our study was 93.8%. In our study, it was determined that Alvarado scoring in elderly patients with suspected acute appendicitis had lower diagnostic power than the normal population, and that CT was valuable in terms of both differential diagnosis and sensitivity. However, there is a need for further studies including more extensive series to support our findings.

**Keywords:** Elderly patient, acute appendicitis, alvarado score

## PP-0062 [Emergency Surgery and Trauma]

# Meckel's Diverticulum Perforation Associated with Strangulated Inguinal Hernia (Littre's Hernia): A Rare Case

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Meckel's diverticulum, which is a remnant of the omphalomesenteric canal, is the most frequent congenital malformation of the gastrointestinal tract. It can rarely be seen in any hernia sac and this condition is defined as the Littre's hernia. A 59-year-old male patient with Meckel's diverticulum perforation associated with strangulated inguinal Littre's hernia was successfully treated with diverticulectomy with linear GIA stapler and and graft-free hernia repair. Littre's hernia may also be present in the cases of abdominal wall hernias requiring urgent surgical intervention due to incarceration. For this reason, it is important to have knowledge about treatment management.

**Keywords:** Littre's hernia, perforation, Meckel's diverticulum

## PP-0063 [Emergency Surgery and Trauma]

# The First Consultation in the Emergency Unit for Acute Right Lower Abdominal Pain in Women in the Reproductive Age: General Surgeon or Gynecologist?

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**Objective:** The suspect of acute appendicitis is the most frequently consulted acute abdomen disease in the emergency units and can cause serious surgical morbidity and even mortality due to complications that may develop in association with delayed diagnosis and/or delayed surgical intervention. The referrals of patients to the departments of gynecology and obstetrics or general surgery by the emergency physicians after admission to the emergency service due to the sudden onset of pain in the right lower quadrant particularly in women at reproductive age can sometimes lead to unwanted delays and serious complications. In this study, we wanted to draw a route guide on which units the first consultation should be done after the first physical examination and laboratory analysis in the emergency service and which clinical data should be used for this decision.

**Material and Methods:** Retrospective data on physical examination and laboratory findings of 335 reproductive women who were admitted to the emergency unit and then consulted to the general surgery with the pre-diagnosis of acute appendicitis and finally operated by a general surgeon and/or gynecologist between April 2009 and December 2017 were evaluated with pathology results and surgical findings.

**Results:** The mean age of the patients was  $24.6 \pm 4.5$  years (range 13-45 years). Acute appendicitis was present in 263 (78.5%), perforated appendicitis in 31 (9.3%), and gynecological organ pathology in 41 (12.2%) patients. Of the cases with gynecologic organ pathologies, 25 had ovarian cyst rupture (7.5%), 12 had corpus hemorrhagicum cyst rupture (3.6%), and 4 had adnexal torsion (1.1%). In the differential diagnosis between acute abdomen patients with appendicitis and gynecologic organ pathologies, hypotension (100/60 mmHg and below), tachycardia (100/min and above), high fever (38C and above), defense, Rovsing's sign, and increased leukocyte counts were found to be statistically significant.

**Conclusion:** In women at reproductive age, acute gynecological organ pathologies may resemble the clinical picture of acute appendicitis. Especially after the first examination and analyses performed in the emergency departments, it is very important to focus on the differential diagnosis and to refer to the correct surgical unit. The presence of hypotension and tachycardia in patients with gynecologic organ pathology and high fever, defense, Rovsing's sign, and increased leukocyte counts in patients with appendicitis were detected to be statistically significant.

**Keywords:** Acute appendicitis, acute abdomen, differential diagnosis, gynecological pathology, general surgery, gynecology and obstetrics

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## PP-0064 [Emergency Surgery and Trauma]

# Frequency of Tumors in the Appendix Specimens of 3754 Patients Applied Laparoscopic Appendectomy Due to the Diagnosis of Acute Appendicitis

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**Objective:** In the pathological examination of appendectomies, the incidence of tumors is reported 1%. In this study, the pathology results of patients who underwent laparoscopic appendectomy with the diagnosis of acute appendicitis in our hospital were retrospectively investigated and the pathologic diagnoses and clinical features of patients detected to have a tumor were tried to be revealed.

**Material and Methods:** The reports of appendiceal pathology specimens performed in our hospital between January 2008 and December 2017 were examined through hospital information system. 4186 pathology reports were reached. While 3754 cases undergoing laparoscopic appendectomy with the diagnosis of acute appendicitis were included in the study, the cases undergoing open appendectomy, having preoperative suspicion of tumor, or undergoing elective appendectomy were excluded from the study. Demographic characteristics and tumor types of the patients were examined.

**Results:** Of 3754 patients, 2388 were male (63%) and 1366 were female (37%). Their mean age was 33,42 years. Of 18 (0,5%) patients whose pathological evaluation revealed tumor, 13 were male (72,2%) and 5 were female (27,8%) and their mean age was 37,6 years. The pathology results of these 18 cases were carcinoid tumor in 7 patients, mucocele in 6 patients, adenocarcinoma in 1 patient, mucinous cystadenoma in 1 patient, malignant epithelial tumor invasion in 1 patient, B-cell lymphoma in 1 patient, and Hodgkin's lymphoma in 1 patient.

Two of seven patients with carcinoid tumors are still being followed by our clinic. In the remaining 5 patients, information on follow-up could not be obtained. The patients with mucocele and mucinous cystadenomas were evaluated for once in the outpatient clinic postoperatively. Right hemicolectomy was applied to the patient with adenocarcinoma and no additional feature was detected in the pathology of colon resection. In the patient with malignant epithelial tumor invasion, screening was performed and additional focus could not be detected. The patient having B-cell lymphoma was performed endoscopic examination due to severe abdominal pain and lymphoma was detected in the gastric biopsies, and the patient was given hematologic treatment. No record of control examination in the outpatient clinic was found for the patient with the diagnosis of Hodgkin's lymphoma. It was stated that the patient could not be reached with the contact information written on the file and this incident was reported to the hospital administration.

**Conclusion:** In our study, the incidence of tumor was detected to be 0.5% in patients undergoing laparoscopic appendectomy due to the diagnosis of acute appendicitis. Informing patients about the importance of following pathology results after discharge and keeping accurate contact information in the hospital information processing system are important in terms of patient follow-up, treatment, and medicolegal aspect.

**Keywords:** Laparoscopic appendectomy, acute appendicitis, pathology, appendix tumors, tumor

## PP-0065 [Emergency Surgery and Trauma]

# A Rare Cause of Massive Gastrointestinal Bleeding: Henoch-Schönlein Purpura

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**Introduction:** Henoch-Schonlein Purpura (HSP) is a vasculitis mediated by IgA immune complex. It is usually seen in children and young adults, but rarely in advanced age. Cases of gastrointestinal bleeding have been reported in the literature. While the patients with digestive system involvement presents with abdominal pain, vomiting, and melena, the findings of imaging techniques are characterized by multifocal mucosal thickening, the presence of skip areas, and mesenteric edema. In this case report, an advanced-aged patient with massive gastrointestinal bleeding due to the digestive system involvement of HSP was presented.

**Case:** A 74-year-old male patient was admitted to the emergency unit with the complaints of rash on the hands and feet, abdominal pain, and diarrhea and his physical examination revealed non-blanching maculopapular rashes on the upper and lower extremities. Hematochezia was detected in his digital rectal examination. In the laboratory analysis, the value of erythrocytes in the urine was measured as 3 (+). In hemogram, the value of leukocyte was 31000/mm<sup>3</sup>, Hgb was 12,3 gr/dl, creatinine was 7,6 mg/dl, and blood urea nitrogen was 89 mg/dl. The result of abdominal computed tomography (CT) without contrast-enhancement, which was performed for the elevated value of urea-creatinine, was reported as increased density in the mesenteric fatty tissue, hyperplastic lymph nodes (panniculitis?), and suspicious wall thickness increase in the distal of the duodenum and in the proximal of the jejunum. The patient was hospitalized in the internal diseases clinic with the pre-diagnosis of the renal and intestinal involvement of HSP, skin biopsy was taken, and steroid was started.

Tachycardia and hypotension developed on the next day of hospitalization. In the physical examination, his abdomen was severely distended and the hemoglobin level was 6.7 gr/dl. In the patient whose transfusion was started, hemodynamic stability was not achieved and ultrasound examination showed no evidence of hemoperitoneum. Nasogastric catheter (NGC) was inserted and intense bile was aspirated. Contrast agent was given through NGC and CT was re-performed. It revealed that proximal small bowel was severely dilated and the lumen of the small intestine was obstructed by possible hematoma. The decision of operation was made in the patient with instable hemodynamics. Small intestines were evacuated by enterotomy from the ileum during the operation. An additional enterotomy was performed at 20 cm distal of the Treitz ligament, no bleeding was observed from the proximal loop. A Foley catheter was placed into the proximal loop and the small intestine was irrigated. Proximal enterotomy was repaired when no drainage in favor of active bleeding was observed from the distal enterotomy. The distal end was anastomosed on the abdominal wall as ileostomy. The operation was terminated and the patient was followed up in the intensive care unit. Hemoglobin levels of the patient was stable at postoperative 15th hour, but he died due to cardiopulmonary arrest. The skin biopsy taken during his hospitalization was reported to be consistent with HSP.

**Conclusion:** HSP, which is more common in children and adolescents, is rarely seen in older ages. Gastrointestinal involvement is resistant to steroid treatment and it increases mortality especially in advanced age. In patients presenting with skin rash, renal insufficiency and gastrointestinal bleeding, HSP should be considered in differential diagnosis.

**Keywords:** Henoch-schönlein purpura, gastrointestinal bleeding, advanced age

## PP-0066 [Emergency Surgery and Trauma]

# A Case of Foreign Body in the Rectum: Case Report

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**Introduction:** Although the incidence of rectal foreign bodies is not known precisely, it is reported to be rare in the literature. Rectal foreign bodies are often made for anal erotic stimulation or satisfaction. The patient may give a misleading anamnesis depending on socio-cultural refrainment. While the foreign bodies in the rectum can be seen in direct abdominal radiographs, they sometimes display no sign as in our case.

**Case:** A 30-year-old male patient stated that he had pushed an approximately 20 cm carrot into his anus 5 hours before his admission to the emergency unit. The patient had no gas-stool discharge after this event. The patient had no complaints of nausea, vomiting and rectal bleeding. He had no defense and rebound in the physical examination, but there was tenderness in the suprapubic area and an image of palpable, painful, and mobile mass below the umbilicus. In the rectal examination, the anal sphincter tonus was decreased and no sign of trauma was found. It was observed that the distal end of the foreign body was leaning against the rectum posterior wall at 5 cm distance from the anal penetration. Under sedation, the foreign body was

viewed by using a speculum in the lithotomy position. While the foreign body was held with the right hand and pulled out with the help of a flat-tipped gear Foerster forceps, it was removed from the anal canal by directing with palpation with the left hand below the umbilicus in the abdomen. It was observed that the removed body was a carrot in the length of about 20 cm and in the diameter of 3.5 cm.

**Conclusion:** Foreign bodies in the rectum are more common in males and the age distribution is bimodal. While they are encountered in younger patients for the purpose of sexual satisfaction, they are encountered in the elderly patients for the purpose of constipation and prostate massage. Low-lying rectal foreign bodies can be extracted under analgesia with direct digital manipulation, with endoscopic snare, or with flat-tipped gear Foerster forceps as in our case. However, for large foreign bodies, general or spinal anesthesia is required for the complete relaxation of the sphincter. Proctosigmoidoscopy is recommended for the diagnosis and treatment of high-lying rectal foreign bodies.

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## PP-0067 [Emergency Surgery and Trauma]

# Retroperitoneal-Intrapleural Hematoma Secondary to Intercostal Artery Bleeding after A Minor Trauma in A Coumadinized Patient

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**Introduction:** Today, abdominal and thoracic injuries are among the most important causes of morbidity and mortality due to trauma. Severe hemorrhages that can lead to hemorrhagic shock even in more minor traumas can be observed in patients receiving antiagregant or anticoagulant treatment due to comorbid causes. In this study, we aimed to present a case receiving anticoagulant therapy and developing severe intrathoracic and retroperitoneal bleeding due to intercostal artery bleeding after a minor blunt trauma.

**Case:** A 68 year-old male patient was admitted to the emergency department with the complaint of left side pain occurring after falling from 2 steps of stair. At admission, the patient, who was using warfarin for a known history of deep vein thrombosis, was conscious, oriented, and cooperative. The Glaskow Coma Scale was 15. The prothrombin time was 21.3 seconds and the INR value was 1.62. There was no evidence of intraabdominal hemorrhage in the thoracoabdominal CT of the patient whose hemoglobin values were found to be 14g/dl and 13.4g/dl in the emergency unit. A fracture was observed at the 10th and 11th ribs in the posterior area of the thorax. The patient, who had a minimal hematoma in the neighborhood of the ribs, was hospitalized in the general surgery clinic for follow-up. Thoracoabdominal control CT at the 24th hour was planned for the patient who developed syncope twice on the first day of follow-up. He was taken into the intensive care unit for monitorization. The CT revealed a hematoma, the largest size of which was 200x150mm, extending to the retroperitoneum and having contrast media extravasation in the neighborhood of the fracture margins. In the evaluation of the hemogram values, the control value was 8.9 g/dl. At the 48th hour of his follow-up, he was performed CT. No increase was seen in the size of the hematoma and the decrease of hemogram value was stopped. It was decided to continue the follow-up. In the patient followed as stable, the Video Assisted Thoracoscopic Surgery (VATS) was performed by the team of general surgery for intrapleural hematoma drainage. The hematoma was drained. The hemostasis of the moderate bleeding foci was achieved. On the 11th day of hospitalization, the patient was discharged with some recommendations. The patient continues his control examinations as stable in the first year of his follow-up.

**Conclusion:** Multitraumas are cases requiring a multidisciplinary close follow-up due to possible secondary pathologies. Serious medical and legal problems can be experienced due to not performing the follow-ups of patients, who have a stable course at the time of first admission, for an adequate time. Severe hemorrhages can be seen even in minor traumas particularly in patients receiving antiagregant-anticoagulant treatment for another comorbid condition. For this reason, it is important to observe trauma patients for 24-48 hours from the time of first admission and to monitor vital signs and hemogram values for the prevention of late complications secondary to trauma.

**Keywords:** Hematoma, intercostal, minor, trauma

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## PP-0068 [Emergency Surgery and Trauma]

# Pneumoperitoneum after Cardiopulmonary Resuscitation

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**Introduction:** Pneumoperitoneum is used to define free air in the peritoneal cavity. Most cases (>90%) are a result of intraabdominal organ perforation. Generally, rapid surgical intervention is needed to reduce the severity of enteric contamination in the peritoneal space in these patients. However, there is a subgroup of patients with pneumoperitoneum that have no positive findings. These patients were classified as 'spontaneous' or 'non-surgical' pneumoperitoneum. In this article, we presented our patient who developed cardiac arrest, performed CPR, and subsequently pneumoperitoneum.

**Case:** A 68-year-old male patient who was operated on by an otorhinolaryngologist due to subglottic stenosis was admitted to our hospital due to respiratory distress in the 4th month after discharge. Patient with a history of COPD, heart failure, hypertension, and diabetes had respiratory arrest while being hospitalized in the department of otorhinolaryngology for elective re-operation on December 2017. He was applied CPR for 10 minutes and tracheostomy was performed because of inability to intubate. The general condition of the patient deteriorated and thoracic CT was requested with the pre-diagnosis of pulmonary embolism. Massive intraabdominal free air was observed in the abdominal sections that were examined. Then, the patient was consulted to us. The abdominal examination of the patient, who was unconscious, could not be evaluated exactly. The emergency laparotomy decision was taken with the pre-diagnosis of perforation because of the presence of diffuse free air in the upper abdomen, gradually worsened general condition, and the white blood cell count of 14.300. All gastrointestinal organs from the distal esophagus to the rectum were explored in the laparotomy. However, there was no evidence of perforation. Pneumotosis intestinalis was detected in the ascending colon. The solid organs were healthy. No intraabdominal pathology was found. Pneumoperitoneum associated with barotrauma was considered. On the 3rd postoperative day, drains were removed and enteral nutrition was started. The patient having congestive heart failure and pneumonia while being followed with a ventilator was exitus on the postoperative 18th day.

**Conclusion:** Pneumoperitoneum is a pathology that should be evaluated urgently because it indicates the perforation of the abdominal organs. However, about 10% of patients may not have intra-abdominal pathology. The cause of pneumoperitoneum can be trauma, ventilator, pneumothorax, difficult intubation, or respiration via a mask or it can rarely occur after sexual intercourse. Endoscopic interventions may also be the cause of iatrogenic pneumoperitoneum. In the literature, pneumoperitoneum cases associated with scuba diving, adenotonsillectomy, bone marrow transplantation, or extraction of the lower molar tooth have been reported. Cardiopulmonary resuscitation is also one of the rare causes of pneumoperitoneum. Our patient had a history of COPD and was under ventilator therapy. In its etiology, difficult intubation and respiration with a mask were considered. This situation suggested that a conservative approach might be better in patients who had COPD and were under ventilator treatment after difficult intubation. A combined evaluation of detailed history, appropriate laboratory examinations, radiological imagings, and physical examination findings for detecting pneumoperitoneum may prevent unnecessary laparotomies. It is important to determine the presence of visceral organ perforation with the existence of intraperitoneal free air, particularly in patients followed up in the intensive care unit and applied CPR. In patients without visceral organ perforation, the clinical picture improves with conservative treatment.

**Keywords:** Aseptic pneumoperitoneum, idiopathic pneumoperitoneum, spontaneous pneumoperitoneum

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PP-0069 [Emergency Surgery and Trauma]

## A Rare Complication of Sigmoid Colon Diverticulum: Necrotizing Fasciitis of the Lower Extremity Occurring Due to Retroperitoneal Perforation

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**Introduction:** Diverticulitis is the most common complication seen in 10-25% of patients with diverticulosis. Although the diverticulitis-associated microperforations may be limited, macroperforations may cause diffuse peritonitis and abscesses that may display a mortal course. We wanted to share the retroperitoneal perforation of the diverticulitis that rarely occurs and does not present with abdominal findings.

**Case:** A 58-year-old female patient was treated at different clinics due to a backpain that had started 15 days ago and later complaints of redness, pain, and swelling in the left lower extremity. When the patient was brought to the emergency unit, she was unconscious. In the physical examination, her pulse was 110, BP was 100/60, and temperature was 36.7 and no sensitivity, defense, and rebound were detected in her abdomen. There were cellulitis findings and subcutaneous emphysema in the left lower extremity. In the laboratory analysis, WBC was found as 12000, CRP as 34, Cre as 1.44, and Hb as 7.8. The computed tomography of the abdomen showed a pouch filled with the extralumination of the oral contrast agent, extending to the retroperitoneum at the descending colon level. The patient with the findings of sepsis was taken into an emergency operation. An approximately 1 cm of perforation and 10 cm abscess pouch were observed in the sigmoid bone. The abscess pouch with fecal contamination was draining into the left lower extremity with the iliopsoas

muscle tract. The patient was applied the Hartman's procedure. Subsequently, the procedures of drainage, irrigation, and debridement were simultaneously performed by the orthopedic physicians with a total of 4 incisions in the thigh and the lateral and medial areas of the cruris. In the postoperative intensive care unit, intermittent dressing and debridement were performed by the clinic of orthopedics. In the abscess and blood cultures, resistant bacterial and fungal growths were observed. The patient was exitus due to multiorgan insufficiency associated with sepsis without regression in the postoperative follow-ups and deep metabolic acidosis on the 9th day. No pathologic findings were found in favor of malignancy.

**Conclusion:** In general, retroperitoneal perforations occur with back pain, intestinal dysmotility, fatigue, lower abdominal pain, and fever. In literature, the case of necrotizing fasciitis as a result of diverticulum perforation is not seen, but there are 6 previously reported cases of necrotizing fasciitis due to adenocarcinoma perforation. The routes of the infection from the retroperitoneal area to the lower extremity can be psoas sheath, femoral sheath, femoral canal, sciatic notch, and obturator foramen. Diverticular perforations are usually to the intraperitoneal area. Retroperitoneal perforation is rare and its diagnosis is difficult due to the lack of specific symptoms. On the other hand, necrotizing fasciitis is a condition requiring rapid diagnosis and treatment. Given the risk caused by necrotizing fasciitis occurring in this case, the underlying rare causes should be considered by clinicians. Retroperitoneal events should also be considered in the differential diagnosis of necrotizing fasciitis and cellulitis of the lower extremity.

**Keywords:** Sigmoid diverticulum, retroperitoneal perforation, necrotizing fasciitis

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## PP-0070 [Emergency Surgery and Trauma]

# Penetrating Stab Wound in the Gluteal Region: Small Bowel Perforation Due to Pelvis Preponderance: Case Report

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**Introduction:** Penetrating stab wounds in the gluteal area are commonly encountered. However, it is very rare that these injuries lead to perforation of the small intestine by penetrating into the pelvis. As the depth of penetration increases, there may be life-threatening injuries such as vascular injury, bowel injury, and genitourinary injury depending on the localization of the injury.

**Case:** A 24-year-old male patient was admitted to the emergency department due to a penetrating stab wound in the gluteal region. His physical examination revealed a 1-cm incision in the superior zone at 10-o'clock position in the left gluteal region and an eviscerated and gangrenous ileum loop in the superior zone at 9-o'clock position in the right gluteal region. The vital signs of the patient were stable. The patient was inserted a bladder catheter and no macroscopic hemorrhage was observed. The peripheral pulses of both lower limb were palpated and they were normal. There were no motor deficits on both lower extremities. No abnormality was detected in digital rectal examination. Defense and rebound were detected in the abdominal examination and the decision of operation was made by considering the gangrenous segment of the ileum. Laparotomy was performed with subumbilical midline incision in the abdomen. In the exploration, approximately 200 cc hemorrhagic fluid was present in the abdomen and it was aspirated. It was observed that approximately 15 cm small intestine loop at the 20 cm proximal of the ileocecal valve was removed out from the obturator canal opened due to the injury and it was incarcerated. The incarcerated intestinal loop was taken into the abdomen. In the examination, 3 perforated areas and necrosis were observed. Resection anastomosis was performed. In the rectoscopy performed on the postoperative second day, rectal injury was re-evaluated. No injury was detected. Electromyography (EMG) was performed after consulting to a neurosurgeon for the control of possible sciatic nerve damage. No deficit was found in EMG. On the sixth postoperative day, the patient with good general condition was discharged with full recovery.

**Conclusion:** As a result, penetrating stab wounds in the gluteal region may cause many injuries that can be life-threatening. Small intestinal perforation is one of these and should be kept in mind though it is rarely seen.

**Keywords:** Penetrating stab wound, pelvis, small intestine perforation

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## PP-0071 [Emergency Surgery and Trauma]

# Is It Possible to Treat Acute Appendicitis while the Institutions are Making A Loss?

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**Objective:** Appendectomy is one of the most common emergency surgeries performed by a general surgeon throughout life. In our country, this operation is defined as 'package operation' by the Social Security Institution (SSI) and repayment of services to hospitals is made on a fixed amount. The aim of this study is to investigate the cost-effectiveness relationship of this operation from institutional perspective.

**Material and Methods:** The files of patients who underwent appendectomy in our hospital due to the pre-diagnosis of acute appendicitis between January 2014 and July 2017 were retrospectively reviewed. Demographic data of the patients, laboratory findings, operative data, emergency services, and hospital invoice costs for surgery and hospitalization were examined. Open and laparoscopic techniques were compared in terms of cost.

**Results:** Appendectomy was performed in 282 patients (54.6% male) with a median age of 33 (18-85) years. A total of 248 (87.9%) patients were operated with open technique and 34 (12.1%) patients were operated with laparoscopic technique. The median length of operation was 60 (20-215) minutes and the median duration of hospitalization was 2 (0-20) days. Complications developed in 10 (3.5%) patients during their hospitalizations. While the median expense of the operating room was 247.49 (102,72-1242,97) TL, the median total invoice cost was 741.49 (457,67- 3886) TL. In only 4 cases, it was seen that the hospitalization invoice did not exceed the repayment amount. In the laparoscopic group, operating room costs (292,48 vs. 244,66 TL,  $p=0.0069$ ) and total invoice cost (964,46 vs. 707,62 TL,  $p<0.001$ ) were found to be significantly higher than the open surgery group.

**Conclusion:** In the present repayment system, appendectomy surgery is not cost effective in an institutional sense. Because it is impossible not to operate patients admitted to the emergency department with acute appendicitis, the higher preference of the open technique can help the institutions to lose less money.

**Keywords:** Acute appendicitis, appendectomy, cost

## PP-0072 [Emergency Surgery and Trauma]

# Laparoscopic Resection of Ileal GIST Mimicking Acute Appendicitis

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Gastrointestinal stromal tumors (GISTs) are the most common mesenchymal tumors of the gastrointestinal system and they constitute 1-3% of all gastrointestinal system tumors. These tumors usually result from KIT and PDGFRA mutations. Gastrointestinal stromal tumor (GIST) is a nonepithelial mesenchymal tumor that was first defined by Mazur and Clark in 1983. They occur due to the phosphorylation of the tissue growth factors in association with KIT exons 9, 11, 13, and 17 and PDGFRA exons 12, 14, and 18 mutations. However, these mutations are not seen in 5-15% of GISTs. The diagnosis of GISTs can be histologically established with immunohistochemical evaluations performed for the detection of KIT, CD117 and PDGFRA mutations. Only KIT positivity is not sufficient for diagnosis and KIT and PDGFRA negativity cannot rule out the absence of GIST. GIST is derived from intestinal Cajal cells that are a part of the autonomic system in the intestinal system and control motility in the digestive system. In the gastrointestinal system, GIST is mostly seen in the stomach (60%) and then in the small intestine (30%), duodenum (5%), rectum (4%), colon and appendix (1-2%), and the least frequently in the esophagus (1%). When GIST is in the abdominopelvic cavity, such as the omentum, mesentery, uterus, retroperitoneum, outside the intestinal system, it is called extraintestinal GIST. GISTs mostly affect men at the rate of 55% and the median age of their onset is 55-60 years. GIST has a wide spectrum of symptoms according to its size and location. The most common symptoms and signs are abdominal pain and bleeding. While it presents with early satiety, abdominal swelling, intraabdominal hemorrhage, gastrointestinal bleeding, and anemia-related fatigue in some patients, it occurs with the pathologies (tumor rupture, obstruction, acute appendicitis) such as acute abdomen requiring urgent interventions, in others. GIST metastases can generally develop in the liver and also in other organs. Lymph node metastasis is very rare. In advanced-stage diseases, metastasis to the lung or other extraabdominal organs can be seen.

In this study, we report a case admitted to the emergency unit due to abdominal pain, laparoscopically explored with the pre-diagnosis of acute appendicitis, performed laparoscopic resection because of the detection of a mass in the terminal ileum, and having small bowel-originated GIST confused with acute appendicitis due to the diagnosis consistent with ileal GIST.

**Keywords:** Ileal GIST, acute abdomen, appendicitis

PP-0073 [Emergency Surgery and Trauma]

## A Rare Cause of Intraabdominal Bleeding in a Pregnant Patient: Desmoid Tumor Invading to the Splenic Artery in the Pancreatic Tail

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**Introduction:** Desmoid tumor (DT), also known as aggressive fibromatosis, is a rare soft tissue neoplasm. It is often seen in young patients and women. The incidence of DT is higher in patients with familial history of adenomatous polyposis (FAP) and history of previous surgery or pregnancy. Although this tumor has a benign histology, it is locally invasive. DTs with pancreatic origin are rarely encountered. The treatment of these rare tumors is difficult because of their locally being aggressive and having recurrence potential. Resection with clean surgical margin is the first choice for the treatment. In this study, we would like to share a case of an emergency operation in a pregnant patient, who was admitted to the emergency unit with the signs of acute appendicitis, with a clinical picture in which DT with pancreatic localization perforated the splenic artery and caused massive bleeding into the abdomen.

**Case:** A 21-year-old, 11-weeks pregnant woman presented to the emergency unit with the complaints of abdominal pain, nausea and vomiting lasting for a day. She described a pain in the right lower quadrant in lying position and palpation revealed tenderness, rebound and defense in the right lower quadrant. Her white blood cell count was 16 410, Hb was 13.8, Hct was 39.2, and Plt was 336 000. In the ultrasound, a tubular segment unresponsive to compression, which could not be followed from the proximal to the distant part but reached the diameter of 7 mm at the largest point was observed in the right lower quadrant. The surrounding fatty tissue was heterogeneous and edematous, and the appearance was consistent with appendicitis. After the consultation to the department of gynecology and obstetrics, it was seen that there was no gynecologic pathology and the fetus was mature and FHR (+). The patient was hospitalized for operation. In the follow-ups, her pulse rate was 120/min, BP was 80/40 mmHg and white blood cell count was 21 620, Hb was 8.0, Hct was 22.8, Plt was 307000, and INR was 1.573 in the control complete blood cell count. The control ultrasonography revealed a 47x78 mm in the lower right quadrant, a 87x24 mm in the lower left quadrant, a 41x54 mm in the douglas pouch, a 86x68mm hypoechoic solid appearance in the epigastric region and diffuse fluid in the perihepatic region. In the laparoscopy of the patient who was taken into an emergency operation, abundant amount of hemorrhagic fluid was seen in the abdomen. When the midline incision was applied into the abdomen, a mass in the distal part of the pancreas and also regarding the major curvature of the stomach was observed. It was seen that the lesion had perforated the splenic artery and had active bleeding. Splenectomy was performed by ligating the artery and vein. The thick needle biopsies were taken from the mass. Intraoperative 10U ES, 10U TDP were administered. The operation was terminated by placing drains in the splenectomy and douglas pouch. The patient, whose pathological evaluation was reported as desmoid tumor, was operated under elective conditions ten days later. Partial pancreatic resection and stomach wedge resection procedures were applied. It was seen that the surgical margins of the 8x7x4cm mass that was removed were clean. In the controls, it was observed that the fetus showed proper development. On the 7th day after the second operation, the patient was discharged.

**Conclusion:** Desmoid tumors may occur in musculoaponeurotic structures. In patients with FAP, they are mostly encountered in the mesentery and abdominal wall, but they can be seen in extraabdominal sites in sporadic cases. They do not metastasize, but they can be invasive to the adjacent structures, extend through the fascia, abrade the bones by attaching them, and squeeze the blood vessels, nerves, ureter, and abdominal hollow organs by occluding them.

**Keywords:** Emergency surgery, desmoid tumor, pregnant, intraabdominal bleeding

PP-0075 [Emergency Surgery and Trauma]

## Evaluation of Diverticulitis Patients Treated in Our Emergency Surgery Unit (111 cases)

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**Objective:** While the rate of diverticular disease in the population over the age of 60 years is 60%, 10-25% of them develop acute diverticulitis. The diagnosis of the disease is more definite today, but discussions on the management of particularly complicated diverticulitis still continue. In this study, prospectively recorded data of diverticulitis patients treated at the Emergency Surgery Department in Okmeydanı Training and Research Hospital were retrospectively reviewed.

**Material and Methods:** The study included 111 patients treated with the diagnosis of diverticulitis at Okmeydanı Training and Research Hospital, Emergency Surgery Department between January 2015 and December 2017. The diagnosis of diverticulitis was established through anamnesis, physical examination, laboratory analysis, and imaging methods. The demographic characteristics of the cases, the lengths of hospitalization, the localizations of the diverticula, the Hinchey Stages (HS) (HS1: pericolic inflammation, abscess, HS2: pelvic, intraabdominal, retrocolic abscess, HS3: diffuse purulent peritonitis, HS4: diffuse fecal peritonitis), surgical indications and methods, and morbidity and mortality rates were evaluated retrospectively.

**Results:** Of 111 patients included in the study, 59 (53%) were female and 52 (47%) were male. The mean age was 57.8 years. The mean duration of hospitalization was 3.6 days in the patients receiving conservative treatment, but 11.7 days in the operated patients. Diverticulitis was located in the sigmoid colon in 108 (97,3%) patients and in the cecum in 3 (2,7%) patients, who were all male. The Hinchey stages were as follows: HS1 at 59.3%, HS2 at 17.6%, HS3 at 19.4%, and HS4 at 3.7%. Of 4 (3,6%) exitus patients, 2 were HS3 and other 2 were HS4. While 75% of the patients were applied conservative treatment, 3,7% (HS2) were performed percutaneous drainage and 21,3% were operated (24 patients HS3 and HS4). The Hartman procedure was performed in 14 (58,3%) of 24 operated patients, laparoscopic peritoneal lavage in 6 (25%), and anterior resection in 4 (16,7%). Among exitus patients, 2 HS3 patients were applied anterior resection and HS4 patient was applied Hartman procedure.

**Conclusion:** Hinchey's staging is an important classification system used frequently in the treatment of acute diverticulitis. When the results of our study are evaluated, it can be said that the treatment of uncomplicated HS1 diverticulitis is performed with appropriate antibiotic and fluid replacement and percutaneous drainage and medical treatment are safe and sufficient for the treatment of HS2 diverticulitis. We suggest that laparoscopic peritoneal lavage is advantageous for HS3 diverticulitis and Hartman procedure can be preferred for the treatment of HS4 diverticulitis.

**Keywords:** Complicated diverticulitis, laparoscopic peritoneal lavage, Hinchey's staging

## PP-0077 [Emergency Surgery and Trauma]

# De Garengot Hernia, A Rare Cause of Acute Abdomen

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**Introduction:** The presence of an appendix in the femoral hernia was first described by French surgeon Rene Jacques Croissant de Garengot in 1731 and it is seen in less than 1% of all femoral hernias. The development of acute appendicitis in De Garengot is a rarer condition. Its incidence is higher in women, depending on the gender-related incidence of femoral hernias. It is difficult to diagnose before the operation and the complications are generally complicated. In this case report, a patient hospitalized in our clinic with the diagnosis of plastron appendicitis and found to have DeGarengout hernia and perforated appendicitis in the follow-up was discussed.

**Case:** A 57-year-old female patient was admitted to the emergency unit abdominal pain. In the patient's examination, tenderness was detected in the right lower quadrant and suprapubic region, but no rebound and no defense were found. She had a mass that could be felt with deep palpation in the right lower quadrant. The result of lower abdominal ultrasonography was reported to be consistent with plastron appendicitis. The patient with elevated leukocytosis and C reactive protein was admitted to our clinic and intravenous fluid and antibiotic were started. On the second day of hospitalization, the physical examination of the patient, whose clinical and laboratory findings were deteriorated, revealed a 4 cm fluctuating mass in the proximal of the right thigh. On the contrast-enhanced computed tomography, a plastron was observed in the right lower quadrant with a size of 5 cm, and an abscess leaning on the proximal of the femoral canal, continuing with the intestinal loops, and extending to the thigh along the femoral canal was detected. In the patient planned to be operated, laparoscopic exploration revealed an omental gaito in the suprapubic region, the omentum was separated, and 300 cc purulent matter was aspirated from the femoral canal. When the cecum was revealed, the distal part of the appendix was detected to be amputated. The mesoappendix was separated by vascular sealing device to reach the root of the appendix, the root was ligated with loop sutures, and partial appendectomy was performed. An amputated distal appendix was seen at the entrance of the femoral canal. In a femoral exploration performed with a separate incision, 200 cc additional purulent matter was drained and the remaining part of the distal appendix was removed from here. Drain was placed in the femoral abscess pouch and right paracolic area in the abdomen and the operation was terminated. The patient was discharged on the 7<sup>th</sup> postoperative day.

**Conclusion:** It is difficult to establish preoperative diagnosis in De Garengot hernias. It has been reported that the appendix can be incarcerated in such hernias, but the signs of typical appendicitis are not observed due to the localization of the inflammation in the femoral canal. In patients admitted due to abdominal pain, the physical examination result that is inconsistent with acute appendicitis and the finding of positive inflammation in the right lower quadrant and femoral canal in imaging methods should suggest De Garengot hernia.

**Keywords:** De Garengot hernia, femoral hernia, acute appendicitis, laparoscopy

## PP-0078 [Emergency Surgery and Trauma]

# Is Peritoneal Closure Necessary in Open Appendectomy? A Prospective Randomized Study

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**Objective:** Appendectomy is the standard treatment for acute appendicitis. Although laparoscopic appendectomy has gained popularity in recent years, open appendectomy is still the most preferred method. While laparoscopic appendectomy incisions are closed, the separate closure of the peritoneum is usually not paid attention and the closure of the peritoneum during open appendectomy is often dependent on the surgeon's preference. The purpose of this study is to assess the effect of the closure of the peritoneum while closing the appendectomy incision on patients' postoperative complications, pain, and quality of life.

**Material and Methods:** This study was planned as single-center, prospective, randomized, and double-blind. The study population consisted of patients aged between 18 and 65 years, who were admitted to the emergency unit and performed open appendectomy with the diagnosis of acute appendicitis between June 2016 and December 2016. The criteria for exclusion were determined as the presence of intraabdominal abscess in preoperative imaging, intraabdominal observation of local or diffuse purulent fluid, pregnancy, story of malignancy, chronic liver disease, chronic renal failure, diabetes, the presence of a known psychiatric or mental disturbance, and refusal of the patient to participate in the study. The patients were randomized during the closure of appendectomy incision and they were put into two groups according to whether the peritoneum was closed or not. The patients' demographic data, duration of operation, duration of hospitalization, visual pain scores on the postoperative 1<sup>st</sup> day (0-10), evaluation of the quality of life through the EuroQol-5D-5L test on the postoperative 10<sup>th</sup> day, surgical site infections developing during the postoperative 30 days, wound dehiscence, bowel obstruction, and mortality were recorded.

**Results:** A total of 112 patients who underwent appendectomy were included in the study. The mean age of all patients was 30.94±12.72 years, and the female to male ratio was 40/73. When the demographic data of the patients were compared, no statistical difference was found between the groups. On the postoperative 1st day, the median value of the VAS score was found to be lower in the group with open peritoneum but not statistically significant (3 vs 4, p=0.134). When the durations of operations were evaluated, it was observed that the patients without closed peritoneum had a significantly shorter duration of operation than those with closed peritoneum (30.96±15.08 vs 38.54±17.50, p=0.016). All the patients in both groups were discharged on the first postoperative day. In the comparison of postoperative complications, no significant difference was found between the groups. No mortality was observed during the follow-up period. In the EuroQol-5D-5L results of the groups, there was no difference in the index scores between the two groups (p=0.6). There was no statistically significant difference between the two groups in terms of general well-being (p=0.891).

**Conclusion:** In literature, the number of non-obstetric studies about the necessity of closing the peritoneum is limited. In our study, it was observed that leaving the peritoneum open shortened the length of operation. Although it did not reach statistical significance level, a decrease in the postoperative VAS score was also observed. In the quality of life parameter that we evaluated differently from previous studies, no difference was detected both in index scoring between the groups and in general well-being. Moreover, leaving the peritoneum open did not cause an increase in postoperative complications.

**Keywords:** Pain, appendectomy, peritoneal bleeding

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## PP-0079 [Emergency Surgery and Trauma]

# A Rare Indication for Laparotomy: Jejunal Diverticulitis Perforation

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**Introduction:** Jejunal diverticulosis is a rarely seen disease, which was firstly described by Sommering and Baille in 1794. Its prevalence increases with age and reaches the highest level in the 6<sup>th</sup> and 7<sup>th</sup> decades. Jejunal diverticula usually display asymptomatic course. In symptomatic cases, it can lead to abdominal pain, nausea, vomiting, and malabsorption. In addition, diverticulitis can cause acute complications such as perforation, bleeding, and obstruction. Among these complications, diverticulitis perforation is the most common one and it is seen in 2.3-6.4% of the patients. Delayed diagnosis is an important cause of increased morbidity and mortality. In this article, the presentation of 5 cases who were operated with the diagnosis of jejunal diverticulum perforation in our clinic in the last one year was planned.

**Case:** In our clinic, 5 patients were operated with the diagnosis of jejunal diverticulum perforation in the last one year. Two of these patients were male and 3 were female. The mean age was 73.4 (33-87) years. All of them were admitted to the emergency unit due to the complaint of abdominal pain. Only one patient had acute abdomen. In the laboratory values of the patients, the mean leukocyte value was 12680/mm<sup>3</sup>. There was no subdiaphragmatic free air in the direct radiography. Contrast-enhanced tomographies revealed an appearance of free air between the proximal jejunal loops and an appearance of free fluid in all patients except one. One patient had an interloop abscess. All patients underwent early laparotomy and the exploration demonstrated perforated diverticulum at about 50 cm distal area to Treitz. One patient had jejunal diverticulosis. All patients were performed segmental small bowel resection and side-by-side anastomosis with stapler. All results of the pathologies were reported to be consistent with jejunal diverticulum perforation. Apart from the superficial wound infection that developed in 2 of the patients, they were discharged without morbidity.

**Conclusion:** Jejunal diverticula and complications are rare but often encountered in the elderly male population. Their being among the rare causes of acute abdomen and diagnostic difficulties can lead to delayed treatment. The surgical treatment for small bowel diverticulum complications is the resection of segment with diverticulum and anastomosis.

**Keywords:** Acute abdomen, diverticulitis, perforation

## PP-0080 [Emergency Surgery and Trauma]

# Venous Thrombosis-Associated Primary Appendicitis Epiploica Case Mimicking Acute Appendicitis

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**Introduction:** The epiploic appendages are fat-filled pouches that surround the colon from the cecum to the retrosigmoid junction. Generally, they occur on the antimesenteric surface and in two rows along the tinea libera and the omentalis. These appendages are fed from the vasa recta arteries of the colon and drain into a single vein. Primary epiploic appendicitis (primary appendagitis epiploica, PEA) develops in association with spontaneous venous thrombosis or torsion of epiploic appendages. This ischemic condition usually causes a sudden onset of abdominal pain. In this case report, we aimed to present a case of PEA that was admitted with the complaint of abdominal pain in the right lower quadrant, which was confused with acute appendicitis.

**Case:** A 35-year-old male patient was admitted to our emergency department with complaints of pain that started in the right lower abdomen two days ago and nausea. Physical examination revealed rebound and defense in the right lower quadrant with palpation. In the laboratory analysis, the value of leukocyte was detected to be 9000 and CRP to be 0.02. In the abdominopelvic ultrasonography (USG) performed in the emergency unit, no pathology was detected. The oral and intravenous contrast-enhanced computed tomography (CT) of the whole abdomen showed an approximately 2x3 cm diametered increased inflammatory density in the pericolonic fat plane located in the anterior part of the sigmoid colon. It was evaluated to be consistent with epiploic appendicitis. The decision of diagnostic laparoscopy was made to rule out rebound and other possible intraabdominal emergency pathologies in the abdomen. In the operation, the condition of primary epiploic appendicitis associated with venous thrombosis was observed in the appendix epiploica in the sigmoid colon. The appendix was intact in the right lower quadrant. The appendix epiploica was resected and it was reported to be consistent with epiploic appendicitis in the pathological evaluation. The patient's symptoms were regressed after the operation. The patient, who did not develop any complication, was discharged with full recovery on the postoperative 2nd day.

**Conclusion:** 57% of epiploic appendages are seen in the sigmoid colon. Because of this, PEA is usually seen in the rectosigmoid region. Epiploic appendicitis is a rare condition with non-specific symptoms and it generally occurs with sudden onset of focal abdominal pain in the left lower quadrant. In our case, the symptoms were mostly observed on the right side because of the fact that his sigmoid was long and extended to the right side. PEA is more frequently detected in the 2nd and 5th decades, most often in the 5th decade. In males, its frequency is slightly higher than that of females. The pain is reduced by conservative treatment in 3-7 days. In physical examination of the abdomen, there may be tenderness and some defense localized in the pain lodge with palpation, but there is usually no rigidity. The value of white blood cell count is usually normal or may be slightly elevated. Most patients recover with conservative treatment, but surgery is recommended in patients who do not respond to conservative treatment within 6 days, who have newly developed and rapidly increasing fever, abdominal pain, nausea, and vomiting, or who cannot tolerate oral intake. Our patient was performed diagnostic laparoscopy and excision of the lesion because he had the findings of right lower quadrant and his differential diagnosis for appendicitis and diverticulitis could not be carried out. PAE is a rarely seen disease that can mimic the condition of acute abdomen requiring surgery. In the case of doubt, diagnostic laparoscopy should be a minimally invasive option to be preferred.

**Keywords:** Acute abdomen, epiploic appendicitis, laparoscopy

## PP-0081 [Emergency Surgery and Trauma]

# Late Diaphragmatic Rupture Developing after Blunt Multi-trauma

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**Introduction:** Traumatic diaphragmatic hernias may develop after blunt or sharp abdominothoracic traumas, or after diaphragmatic direct injury or increased intraabdominal pressure. This entity, which was first described in the 1500s, can impair cardiac and pulmonary functions in acute situations and may be mortal. Chronic traumatic diaphragmatic hernias remain asymptomatic due to the high adaptability of the body and can be diagnosed incidentally. On the other hand, traumatic diaphragmatic hernias that can display a mortal course in the late phase of trauma are rare. In this case, it was aimed to share our experience on the rare, late, mortal, and traumatic diaphragmatic hernia mentioned above.

**Case:** A 57-year-old male patient was hospitalized for operation in our hospital's orthopedics department with a femoral head fracture caused by an in-vehicle traffic accident. At the time of admission, the computed tomography (CT) of the whole body was performed with a multidisciplinary approach and related clinics were consulted. No pathology was detected except the hemothorax and perihepatic plastering fluid secondary to 17 mm thick contusion in the left hemithorax in the thoracic and abdominal cavities. The patient, who had stable hemodynamics at the time of admission, no acute picture, and no pathology in complete and routine blood tests, had sudden onset of dyspnea and hypotension at the 36<sup>th</sup> hour of the event in the orthopedic clinic. Upon the detection of changes in favor of hypoxia and acidosis in the blood gas, the patient was performed chest x-ray and abundant intestinal gas was seen in the left lung. The patient, who was still hemodynamically stable, was applied emergency thoracoabdominal CT and the stomach herniated into the left diaphragm from the 4 cm defect and causing mediastinal shift was observed. The patient, whose general condition started to deteriorate, was taken into emergency surgery and patchless diaphragmatic hernia repair was performed with an abdominal approach. The patient was also placed thoracic tube by a thoracic surgeon intraoperatively. The patient did not have postoperative complications and was referred to the Department of Orthopedics for femur fracture fixation.

**Conclusion:** Traumatic diaphragmatic hernia is an entity that should be managed by chest surgeons and general surgeons. Thoracic or abdominal approach is used for these patients. While thoracic approach can be preferred for chronic cases, abdominal approach is recommended in acute hernias. Traumatic diaphragmatic hernias develop in the acute stage after blunt or sharp traumas, but minimal diaphragmatic injuries due to trauma can cause diaphragmatic hernias, which can be mortal with increased intraabdominal pressure in the late phase, although rare. These hernias may be mortal with restrictive heart failure caused by actual cardiac compression, as well as impaired lung functions. Therefore, late diaphragmatic rupture in abdominal traumas is a morbidity that should be considered by surgeons.

**Keywords:** Diaphragm, rupture, blunt trauma

## PP-0082 [Emergency Surgery and Trauma]

# Surgical Interventions in The Treatment of Esophageal Variceal Bleedings

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**Objective:** Gastroesophageal variceal bleeding, which is one of the causes of upper gastrointestinal system bleeding, is still one of the most important mortality and morbidity problems of portal hypertension requiring urgent surgical intervention. Patients whose endoscopic hemorrhage control cannot be carried out and who have comorbid diseases are sometimes taken into operation under emergency conditions. In this study, it was aimed to retrospectively evaluate the surgical intervention options that we performed on patients with endoscopically unstopable gastroesophageal variceal hemorrhage in the last 2 years and to present the results.

**Material and Methods:** In our study, successfully performed surgical procedures of 6 variceal hemorrhagic patients in the Department of General Surgery at Antalya Training and Research Hospital between September 2015 and August 2017 were evaluated. Patients' age, sex, preoperative diagnosis, surgical procedure, duration of hospital stay, and mortality and morbidity rates were retrospectively obtained and evaluated.

**Results:** Of 6 patients, 3 were female and 3 were male. The mean age was 58.5 (39-79) years. Two patients had a history of liver cirrhosis due to chronic alcoholism, 2 had a history of noncirrhotic portal hypertension, and 2 had a history of liver cirrhosis due to chronic HBV. All patients were performed endoscopies before the operation. They were preoperatively administered 7.1 (5-9) units of erythrocyte suspension on average. The preoperative emergency endoscopies revealed stage 3 esophageal varice in 4 patients and stage 1-2 esophageal and also cardia varices in 2 patients. Two patients underwent gastric devascularization, 1 patient was applied mesocaval shunt, and 1 patient was performed liver transplantation. The mean duration of hospitalization was 14.83 (8-31) days. No mortality was seen during surgery and in early postoperative period.

**Conclusion:** Timely surgical intervention of the gastroesophageal variceal bleedings, which is the most serious of the upper gastrointestinal system bleeding, is life-saving.

**Keywords:** Gastroesophageal variceal bleeding

## PP-0083 [Emergency Surgery and Trauma]

# Late Gastric Strangulation Associated with Penetrating Traumatic Diaphragmatic Hernia

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**Introduction:** Diaphragm injuries usually occur with penetrating or blunt injuries. Diaphragm injuries are rare and occur in about 3% of all abdominal injuries. Diaphragmatic injury alone is rare and surgical treatment of complications developing secondary to herniation is unavoidable. In this study, it was aimed to present a gastric strangulation case occurring in association with diaphragmatic hernia due to the development of a fatal complication without any finding of acute abdomen.

**Case:** A 40-year-old female patient was admitted to the emergency unit with the complaints of abdominal pain, nausea and vomiting, and shortness of breath. She had a history of abdominal pain, which started 3 days ago, and gradually increased in severity. The patient was admitted to the department of thoracic surgery about 2 years ago due to penetrating stab wound and she was inserted a thoracic tube and followed up. Her physical examination showed the value of arterial blood pressure as 110/80 mmHg, respiratory rate as 32/min, pulse as 120/minute, and body temperature as 36.9 °C. There was minimal tenderness in the epigastrium and left upper quadrant in the abdomen and no defense and rebound. The intestinal sounds were normoactive. Leukocyte count was 24900/, hemoglobin was 14.1 g/dl, and CRP was 238.7 mg/l. In the radiological examinations, posteroanterior chest X-ray showed air fluid levels completely filling the lower part of the left hemithorax. In thoracoabdominal computed tomography, a defect of 3 cm in diameter in the middle part of the left diaphragm and the herniation of the stomach fundus in the supradyaphragmatic area were reported. The patient was operated urgently. It was seen in operation that the stomach was herniated into the left hemithorax from an approximately 3 cm defect on the left side of the diaphragm. The fundus and corpus of the stomach were in the thorax. The corpus was in the abdomen from the junction of the antrum. It was observed that the herniated area was strangulated and perforated from the posterior wall, and the thorax cavity was contaminated with stomach contents. Total gastrectomy + Roux-en-y esophagojejunostomy was performed. Later, thoracic surgery was included in the operation and a thoracic tube for drainage was placed in the left hemithorax. The patient, who was taken into the postoperative intensive care unit of general surgery, was discharged without any problem on the 14th day.

**Conclusion:** Diaphragmatic injuries can often coexist with liver and spleen injuries. Diaphragm injuries can present with symptoms depending on the size of the defect and the organ herniations. A small defect may not cause herniation in the acute phase and also, it may not cause a symptom, and therefore, it may not be diagnosed. However, progressive herniation may develop over time depending on the pressure difference between thoracic and abdominal cavities. When the herniation develops, respiratory problems and complaints associated with the obstruction and strangulation of the gastrointestinal system develop. In the coexistence of tension pneumothorax and diaphragm hernia, the hernia sac may be reduced and hernia may be masked due to increased pressure. Therefore, the diagnosis of the diaphragmatic hernia accompanying the penetrating thoracic trauma can not be established at an early stage. In our patient, respiratory symptoms were more prevalent without abdominal examination findings. In conclusion, it should not be forgotten that diaphragm injuries may occur in penetrating injuries of the thoracoabdominal area. Early surgical intervention is life-saving in cases developing complications due to herniation.

**Keywords:** Diaphragm, hernia, stomach, strangulation

## [PP-0084] [Emergency Surgery and Trauma]

# Efficacy of Abdominal Washing After Laparoscopic Appendectomy in Acute Appendicitis with Peritonitis

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**Objective:** Despite the large number of research and current treatment protocols, mortality rates still remain high at the rates of 30% -60%. The aim of the present study is to investigate the indications for laparoscopic interventions in the pictures of acute appendicitis with peritonitis and also the technique of laparoscopic interventions, results and postoperative complications for various types of appendicitis.

**Material and Methods:** Diagnostic laparoscopy was performed in 186 patients and catarrhal appendicitis in 2 patients (1.07%), phlegmon appendicitis in 147 patients (79.0%), gangrenous appendicitis in 32 patients (17.2%), perforated gangrenous appendicitis in 5 patients (2.6%), and normal abdominal findings in 22 patients (11.8%). Three trocars were used in the operations (One 10 mm and two 5 mm trocars). Prophylactic antibiotic treatment (Ceftriaxone 1.0 g (iv)) was administered to the patients.

**Results:** All procedures were performed under general anesthesia. The procedures lasted from 15 minutes to 80 minutes.

In the laparoscopic exploration of the abdomen:

1. Local serous peritonitis- in 46 patients (24.7%)
2. Not restricted, fibrous-abscess peritonitis- in 11 patients (5.9%)

(In the right lower quadrant and involving the pelvic cavity)

3. Diffuse fibrous-abscess peritonitis- in 4 patients (2.1%)

Changes in the appendix root and cecum wall were seen in 16 patients (8%). In such cases, we did not perform appendectomy by laparoscopic method-ligature method. In this case, with the help of laparoscope, we focused on the processing of appendicular stump with De-Kok method by performing appropriate mini-laparotomy (2-3cm) to the appendix area. Thus, 5 patients were treated with combined laparoscopic - assisted surgery (De-Kok), and the appendicitis stump was treated with intracorporeal-Z-type suture in 11 patients. In all cases, small pelvis was drained using 5mm trocar. Through these pipes, the abdomen was washed with ozonized solution in the postoperative period. Drainage pipes were removed 1 or 2 days later. The patients were mobilized after 6-8 hours. After the operation, no pain occurred in the surgical site in patients and only non-steroid anti-inflammatory drugs were used. In the treatment period after surgery, no acute problem developed in the patients. As a result of antibiotherapy and infusion therapy against inflammation after the operation (during treatment), no loculation and abscess was observed in the right lower abdominal cavity. While performing such operations, complications did not occur because the abdomen, particularly right lower quadrant and small pelvis, was washed with antioxidant- enriched ozone solution . Only one patient had fluid loculation in right lower quadrant and it was aspirated with the guidance of USG. Thus, the duration of hospital stay was 2-7 days. According to the results of the survey in the treated patients, no complications, postoperative incisional hernia, and wound site infection were observed.

**Conclusion:** Our experience and researches show that intraabdominal washing with antioxidant-enriched ozone solution during laparoscopic appendectomies result in a decrease in early and late postoperative complications to a very low level compared to the appendectomies performed by the conventional method.

**Keywords:** Laparoscopic, peritonitis, appendicitis

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## PP-0085 [Emergency Surgery and Trauma]

# Case of Multiple Small Bowel Perforation in a Patient Receiving Treatment for Neuro-Behçet's Disease

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**Introduction:** Behçet's disease is a systemic and chronic disease characterized by inflammation. Behçet's disease is also known to cause gastrointestinal system (GIS) involvement. In GIS, the most commonly affected organ is the mouth and then the ileocecal region. In this article, the case of multiple terminal ileum perforation detected in a patient with known diagnosis of Behçet's disease will be presented.

**Case:** A 39 year-old male patient with Behçet's disease was consulted to our department with severe abdominal pain while he was being treated due to the diagnosis of neuro-Behçet's disease in the neurology department. It was learned that his pain was present for 2 days and gradually increased. The patient also had simultaneous dental abscess and antibiotic therapy was started in this regard. It was learned that he was receiving colchicine treatment for Behçet's disease in neurology department and steroid therapy was not initiated because of the development of abdominal pain. It was learned from his anamnesis that the diagnosis of Behçet's disease was established 6 years ago. He did not have any comorbid disease except Behçet's disease and he had no history of a previous operation. However, he had a history of azathioprine usage until 1 year ago, but had not



received any treatment for 1 year. Diffuse tenderness and defense were detected in the abdominal examination. In the laboratory analysis, leukocyte was 16300/ul, neutrophil percentage was 87, and CRP was 17 mg/dl. Other parameters were within normal intervals. The direct abdominal radiography in standing position demonstrated subdiaphragmatic free air. Abdominal computed tomography (CT) taken in emergency conditions revealed free air values in the perihepatic region and between the intestinal loops. Emergency operation was recommended to the patient. There was diffuse purulent fluid in the laparotomy performed with midline incision. 4-5 perforation areas smaller than 1 cm were observed in the 10-15 cm area starting from the distance of 5 cm to the cecum in the terminal ileum. After segmental small bowel and colon resections were performed, ileocolic anastomosis was performed. In the postoperative period, the patient had no problem except superficial wound infection and was discharged on the 10th day. His follow-ups in the outpatient clinics for Behçet's disease are continued by the related departments.

**Conclusion:** Behçet's disease is a systemic inflammatory disease that can involve many systems. Although the most commonly affected organs in GIS are the mouth and ileocecal region, involvement can be detected anywhere. A large number of Behçet's patients with multiple perforations in the terminal ileum are available in the literature. It is usually characterized by ischemia, infarction, and subsequently perforation resulted from clinical vascular involvement. Obliteration in the vascular structures and neutrophil infiltration in the affected intestine are detected in its pathology. As anastomosis can be done after resection, operation can be ended with ileostomy according to the degree of peritonitis and ileostomy can be closed electively. In the case of patients with Behçet's disease, perforation should be kept in mind in the presence of abdominal pain and the necessary tests should be done immediately. It should be remembered that peritonitis and sepsis can seriously be life-threatening in case of delay.

**Keywords:** Acute abdomen, perforation, Behçet's disease, entero-Behçet's, ileocecal perforation

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## PP-0086 [Emergency Surgery and Trauma]

# Inguinal Hernia Sac and Small Intestine Mesenteric Injury Associated with Penetrating Trauma

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**Introduction:** Although inguinal hernias are encountered as the most common type of hernia, traumatic injuries of hernia sacs are rarely seen. In the literature, the most common cause of injuries in hernia sacs reaching the scrotum is demonstrated to be gunshot injuries and then penetrating stab wounds. In this study, we will share our experience on a patient who had a scrotal hernia and found to have segmental intestinal ischemia associated with an injury in the meso of the small bowel after opening of the hernia sac following a traumatic injury.

**Case:** A 57-year-old male patient with a history of right scrotal hernia for approximately 10 years was admitted to the emergency service due to the opening of the scrotal hernia after an occupational accident that happened while working with a power tool known as a hand grinder on October 2017. The patient whose the approximately 100-cm bowel loop was observed outside the abdomen and who also had meso injury was taken into an emergency surgery. The herniated intestines were got into the abdomen with subumbilical median laparotomy. It was observed that the circulation of 10-cm bowel loop was impaired in association with the mesenteric injury and a resection anastomosis was performed in this region. Then, the hernia sac was isolated with the right inguinal incision and reduced. It was ligated and removed. In the patient with normal cord elements and testis circulation, hernia repair was carried out by using the Shouldice technique without application of graft and VAC dressing was applied to the wound. After 3 days, the wound of the patient was clean and the skin was sutured. The patient was discharged on the 6th postoperative day.

**Conclusion:** In traumatic hernia sac injuries, it should be kept in mind that bowel loops and mesenteric tissues in the sac can also be injured and surgical exploration should be done carefully. Since sacs in traumatic cases are generally unclean, hernia repair techniques performed without grafting can be preferred.

**Keywords:** Scrotal hernia, trauma, mesentery

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## PP-0087 [Emergency Surgery and Trauma]

# Our Medical and Surgical Treatment Experience on Patients Admitted to the Emergency Unit with the Clinical Picture of Ileus

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**Objective:** Ileus is the condition in which the movement of the intestinal content towards the distal part slows down or completely stops due to any reason. The most common cause of ileus is adhesions associated with previous operation. In this study, we aimed to present the etiology and treatment plannings of patients hospitalized due to ileus.

**Material and Methods:** Patients hospitalized with the diagnosis of ileus in the emergency unit of Selçuk University Medical Faculty Hospital between January 2011 and December 2017 were examined retrospectively.

**Results:** A total of 739 patients with the diagnosis of ileus were referred to our department from the emergency unit. Of these patients, 58.4% were male and 41.6% were female. The mean age of the patients was calculated as 62.3 years. It was found that 453 of the patients received medical treatment and 286 of the patients received surgical treatment. Of the patients treated with medical treatment, 82 were re-hospitalized, but no surgical treatment was required during the hospitalization of these patients. Among the patients undergoing surgical treatment, 33.5% had bride ileus not giving a response to medical treatment, 26.5% had strangulated or incarcerated hernia (incisional, umbilical, and inguinal), 25.1% had newly diagnosed colon-rectum cancer, 10.1% could not be performed colonoscopic reduction due to sigmoid volvulus, and 4.8% developed ileus due to other causes (bezoar, gallstone ileus, internal herniation, etc.). There were a total of 549 patients who were hospitalized due to Bride ileus. It was observed that 72% of these patients developed ileus within approximately 11.2 months after the first surgeon. Of these patients, 17.9% (96) were treated surgically. Of the patients, 37.5% (36) were opened ileostomy, 9.3% (9) were applied colostomy, and 53.2% (51) were performed bridectomy. In 26 patients, primary repair was applied due to intraoperative bowel injury. Wound site infection and intraabdominal abscess occurred in 37 and 3 cases, respectively. In patients who were not operated due to bride ileus and applied medical therapy, symptomatic and radiological healing was observed on the 3rd day on average, oral feeding was started, and the patients were discharged on the 4th day. however, the patients administered surgical treatment for bride ileus were discharged on the 13th day on average.

**Conclusion:** 20-25% of patients who are admitted to the emergency unit with acute abdomen are those having bowel obstruction. The most common cause of intestinal obstructions is ileus associated with adhesions. Most of small intestine obstructions are due to adhesions and most of colon obstructions are due to tumors. There is no clear algorithm for the time of surgery to be performed in patients followed due to bride ileus. when to undergo surgery for the disease followed by Bride ileus. In its approach, the decision of surgery is made based on the evaluation of patient-specific findings and clinical experience. Elderly patients and those having undergone major abdominal surgery may sometimes be admitted with ileus symptoms under the influence of immobilization. In the follow-ups of these patients, medical approaches can be kept in the foreground to avoid exposing them to an additional surgical load. In addition, intraoperative or postoperative complications and some conditions such as opening ostomy prolongs the duration of hospitalization and affect the life standards of the patient. Therefore, we believe that primarily medical treatment should be tried in patients with bride ileus, but the necessary surgical treatment should not be delayed.

**Keywords:** Ileus, bride ileus, emergency surgery, emergency unit

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## PP-0088 [Emergency Surgery and Trauma]

# A Rare Acute Abdomen Case of an Advanced-Aged Patient: Isolated Cecal Necrosis

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**Introduction:** Acute colonic ischemia is often seen in the elderly population. It usually develops in association with atherosclerosis and low blood flow. In rarely encountered cecal ischemia, the clinical signs mimic acute appendicitis and concomitant cardiac insufficiency and renal failure can cause the disease to display a poor prognosis. In this case report, a case of isolated cecal necrosis detected in an elderly patient who was urgently operated due to acute abdomen.

**Case:** A 74-year-old female patient was admitted to the emergency unit with the complaints of diffuse abdominal pain, loss of inappetite, and nausea that continued for about 12 hours. The patient did not have any abnormality except the history of hypertension and previous cholecystectomy. In the physical examination, defense and rebound were revealed in the right lower quadrant of the abdomen. Her blood pressure was 150/95. In the laboratory analysis, the value of WBC was 21,3x10<sup>3</sup>/ul, neutrophil was 17,7x10<sup>3</sup>/ul, CRP was 123 mg/l, Hgb was 11,5 g/dl, total bilirubin was 2.4 mg/dl, and direct bilirubin was 0,74 mg/dl. No air-fluid level and free air was observed in the direct abdominal abdominal radiography. Abdominal ultrasonography revealed edematous cecal wall, inflamed paracecal fatty tissue, and appendix with normal diameter. Tubo-ovarian pathology was not detected. Minimal pericecal free fluid was observed. In abdominal CT, there were localized increase and edema in the cecal wall and multiple pericecal lymph nodes. The thickness of the appendix wall was normal. Anti-hypertensive medical treatment was recommended in the preoperative cardiology consultation. Emergency laparotomy was performed because of acute abdomen (the pre-diagnosis of perforated appendicitis). Right hemicolectomy and ileotransversostomy were performed in the patient who

was found to have isolated cecal necrosis. The patient who did not develop postoperative complication was discharged on the 6th day with recommendations. The pathological result of the patient was reported as ischemic colitis and reactive lymph nodes.

**Conclusion:** Ischemic colitis is the most common form of gastrointestinal ischemias. Isolated cecal necrosis, which is very rare among non-occlusive ischemic colitis cases, may be due to the atherosclerotic or thromboembolic occlusion of the cecal artery, or it may present as non-occlusive cecal necrosis associated with open cardiac surgery, chronic heart disease, and hemodialysis. Isolated cecal necrosis is a rare cause of surgical acute abdomen. In the literature, there are a few case reports. Isolated cecal necrosis mimics acute appendicitis clinically. Emergency surgery is required in cases with clinically and radiologically suspected cecal necrosis. While most surgeons recommend right hemicolectomy and anastomosis, there are also those recommending right hemicolectomy-ileostomy or partial cecal resection. It is difficult to diagnose it early because of its non-specific clinical, radiological, and laboratory findings. In the literature, mortality increases up to 70% in cases not intervened within the first 24 hours and early surgical intervention is of great importance. Although there were no comorbidities that would suggest an isolated cecal necrosis in the differential diagnosis in our case, early surgical intervention provided a significant advantage of survival for the patient. In conclusion, isolated cecal necrosis is a rare cause of acute abdomen that should be kept in mind in the presence of pain localized in the right lower quadrant especially in the elderly patients.

**Keywords:** Ischemic, colon, necrosis, cecum, acute abdomen

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## PP-0089 [Emergency Surgery and Trauma]

# A Rare Cause of Hemorrhagic Shock: Spontaneous Hepatocellular Carcinoma Rupture

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Hepatocellular carcinoma (HCC) is the most common primary malignant tumor of the liver. Intraoperative hemorrhage after the spontaneous rupture of HCC is a complication that can be mortal. Surgical intervention and arterial embolization are among the main treatment options. In our case, the male patient who was admitted to the emergency unit with abdominal pain, distension, and hemodynamic shock was planned to be performed urgent exploration because his abdominal tomography revealed free fluid consistent with hemorrhage. In the intraoperative exploration, intraabdominal hemorrhage and a 4x3 cm hemorrhagic ruptured mass in the second segment of the left lobe of the liver were observed. After lateral segment resection of the left lobe was performed under emergency conditions, a drain was inserted into the abdomen and the operation was terminated without any complication.

The histopathological diagnosis of the patient, who was discharged after the treatment in postoperative period, was reported as "hepatocellular carcinoma". It should be kept in mind that lesions that may be spontaneously ruptured in the liver may be encountered in the cases taken into operation under emergency conditions with the findings of intraabdominal hemorrhage. As in this case, it is life-saving to perform an effective and rapid intervention to the urgent hemorrhagic liver masses.

**Keywords:** Hemorrhagic shock, hepatocellular carcinoma, intraoperative hemorrhage, spontaneous rupture

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## PP-0090 [Emergency Surgery and Trauma]

# De Garengot Hernia: Case Report

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**Introduction:** The presence of appendix vermiformis in the femoral hernia sac is a rare condition and it is called De Garengot Hernia. There is no standard approach to its preoperative diagnosis and operation because it is rarely seen. In this study, a patient who consulted with De Garengot Hernia and the applied treatment are presented.

**Case:** A 59-year-old male patient admitted to the emergency room with the complaints of swelling and pain in the right groin for 24 hours was found to have irreducible hernia in the right femoral region. It was learned from his anamnesis that he did not have nausea and vomiting and he was able to defecate. There was no abnormality in the laboratory analysis except for the white blood cell count of 11000/mm<sup>3</sup>. When the area was entered with the right inguinal incision and the femoral hernia sac was opened, incarceration and gangrenous appendix were observed. Because the root of the appendix could not be reached from the femoral canal, the fascia transversalis was opened and the proximal area of the femoral hernia was reached. The femoral ring was expanded and backward reduction was performed on the sac with its contents. The cecum was reached through the hernia sac and appendectomy was applied. The hernia sac was ligated from the neck region and its excess part was excised. The defect

was repaired with the McVay technique. The patient was discharged on the 3rd day after the operation without any problems. The result of pathological evaluation was reported as acute appendicitis.

**Conclusion:** The presence of appendix vermiformis in the femoral hernia sac constitutes 1% of cases and acute, gangrenous, or perforated appendicitis is found in 0.5%. Since this condition is very rare, a common surgical attitude has not occurred. To perform appendectomy and femoral hernia repair is definitive. We think that patchless repair should be preferred because of the wound site infection rate approaching 29% in De Garengeot hernias.

**Keywords:** De Garengeot hernia, incarcerated hernia, femoral hernia

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## PP-0091 [Emergency Surgery and Trauma]

# A Case of Small Bowel Perforation in a Patient with the Diagnosis of Tuberculosis

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**Introduction:** Tuberculosis is a major health problem with a historical background, which is common in our country. This disease, which is characterized by caseating granulomas, is most commonly seen in the lungs, but can sometimes display multisystemic involvement.

**Case:** A 44-year-old male patient, who was followed up with the diagnosis of HIV in the Department of Infectious Diseases, was consulted to our department due to severe abdominal pain. It was learned that the patient had been diagnosed with HIV about 4 years ago, he did not receive the initiated treatment for a while, and he had been hospitalized in the Clinic of Infectious Diseases with the complaints of fatigue, weight loss, and loss of appetite. The patient's HIV treatment was restarted during his hospitalization. Because there were findings consistent with miliary tuberculosis and the tuberculin skin test (PPD) was measured as 15 mm in the thoracic computed tomography (CT) taken for opportunistic infection scanning, treatment was begun. A few days later, the patient was assessed in our department because of severe abdominal pain. It was learned that the patient's pain was severe for a day. In the physical examination, diffuse tenderness and defense were detected in the abdomen. No pathological findings were found in laboratory analysis. Free air was observed under each diaphragm on the patient's direct abdominal radiography in standing position. In the abdominal CT, wall thickness and dilatation in the small intestine segments and free fluid and pneumoperitoneum between the bowel loops in the abdomen were reported. Emergency surgery was recommended to the patient based on current findings. In laparotomy, an approximately 4 cm perforation with ischemic wound lips and non-smooth margins was found at the 20 cm distance to the ileocecal valve in the ileum and diffuse fluid was detected in the abdomen. The patient was applied segmental small bowel resection and anastomosis. In the postoperative period, broad-spectrum antibiotherapy was added to the treatment because the inside of the abdomen was dirty. The result of pathological evaluation was reported as necrotizing granulomatous inflammation consistent with tuberculosis. The patient was given antituberculosis therapy for about 2 years because the results of thoracic CT and the pathology of small intestine resection were consistent with tuberculosis. Due to the HIV positivity, his follow-ups are being continued in the Department of Infectious Diseases.

**Conclusion:** The gastrointestinal system (GIS) tuberculosis is a clinical picture that is still quite common although its rate has decreased compared to the previous years. It can accompany to pulmonary tuberculosis or its isolated form can be encountered. With a large majority, it affects the ileocecal region and the jejunum. It usually occurs as ulcerative or hypertrophic lesions. It can be a condition that can be encountered at every age and most of the cases have symptoms such as abdominal pain, nausea, vomiting, fever, and fatigue. Sometimes, a palpable mass may develop in the right lower quadrant. The final diagnosis of GIS tuberculosis can be established by the demonstration of the bacterium resistant to acid, its growth in the culture, or PCR. In the presence of a suspicion in patients with a known diagnosis of primary tuberculosis, treatment can be started. GIS tuberculosis can cause complications such as bleeding, perforation, and obstruction. Emergency surgical intervention can be needed in the occurrence of complications, particularly perforation, and it should not be forgotten that the morbidity and mortality rates can be high in these patients.

**Keywords:** Acute abdomen, perforation, tuberculosis, ileocecal involvement

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## PP-0092 [Emergency Surgery and Trauma]

# Case Presentation: Adult Hirschsprung's Disease Presenting with Perforation

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**Introduction:** Adult Hirschsprung's disease (HD) is a commonly misdiagnosed and rare cause of constipation. The total absence of intramural ganglion cells in the submucosal (Meissner) and myenteric (Auerbach) nerve plexuses of the affected intestinal segment is the primary pathology in HD. 95% of HD cases are diagnosed before the age of 5 years. Although colon perforation mostly occurs with tumor, diverticulitis or traumatic causes in adult patients, a 38-year-old Hirschsprung patient undergoing an emergency surgery due to perforation is presented in this study.

**Case:** A 38-year-old male patient was admitted to the emergency unit due to severe abdominal pain going on for 2 days. In the anamnesis of the patient, it was learned that he had the complaint of constipation gradually increasing in years, he had consulted to health centers for this condition, he had weight loss for the last 6 months, and his abdominal swelling increased gradually and started to prevent the daily activities of the patient. His abdominal examination revealed severe distension. In the laboratory analysis of the patient, the value of leukocyte was  $12.03 \times 10^3/\mu\text{L}$  and C-reactive protein value was 16.5 mg/l. In the abdominal computed tomography, there was an apparent gas-stool distension in the all colon loops and it was measured as 112 mm at the widest point. At the rectum-sigmoid colon level, the wall was thick and the colon wall was slightly thinner at the transverse colon level. There was a small amount of free fluid and massive extraluminal air in the abdomen. The patient, who was radiologically diagnosed with perforation, was taken into emergency operation. In the exploration, 100ml of intraabdominal purulent fluid was detected. The diameter of the rectum and sigmoid colon were approximately 20 cm and a 3-mm perforation area was observed in the anterior area of the sigmoid colon. Minimal dilatation was seen in the ascending colon, transverse colon, and descending colon. The colon between the ascending colon distal and the rectosigmoid junction was resected and the Hartman procedure was performed. Because 150 ml purulent fluid was seen in the abdominal drain on the postoperative 3rd day, oral iv rectal contrast-enhanced abdominal CT was performed and it revealed no contrast-media leakage outside the lumen. Therefore, it was decided to administer conservative follow-up. On the postoperative 5th day, the decision of emergency operation was taken because of the presence of fecaloid discharge from the patient's incision. A 3-cm opening in the stapler line at the distal area of the rectum closed in operation and intraabdominal purulent fluid were detected. The opening was repaired and the abdomen was cleaned. After completing the treatment of the wound site infection in the median incision, the patient was discharged on the 23rd day after the first operation. After the discharge, biopsy was taken through rectoscopy from the rectum wall. The patient is biopsied from the rectum wall by rectoscopy after discharge. In the pathologic examination, microscopic inflammation rich in eosinophils was observed and ganglion cells and peripheral nerve bundles were not seen in the submucosa.

**Conclusion:** In this case having long-term constipation, which was not investigated adequately, it was observed that morbidity increased in the postoperative period. Rare diseases such as HD should not be overlooked for adult patients admitted to health institutions due to constipation. The potential causes of constipation should be actively investigated through methods such as endoscopy and rectal biopsy, and the signs of disease should not be overshadowed with symptomatic treatments without revealing its etiology.

**Keywords:** Adult Hirschsprung, colon perforation, intestinal obstruction

## PP-0093 [Emergency Surgery and Trauma]

# Accuracy Rate of Tomography Results Evaluated with the Method of Service Purchase in Cases of Acute Appendicitis

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**Objective:** Acute appendicitis (AA) is the most common emergency surgery performed by general surgeons. Its delayed diagnosis causes high mortality and morbidity. Computerized tomography (CT) is the most effective imaging technique in diagnosing AA. The clinician and the radiologist should be in contact for increasing the accuracy rate of CT. In CTs reported as service purchases, this communication is broken. In this study, it was aimed to investigate the effect of this situation on the success of CT in diagnosing AA.

**Material and Methods:** The data of 161 patients who were operated with the pre-diagnosis of AA at Ordu University Educational and Research Hospital between 2015 and 2017 and had CT findings were scanned retrospectively. The results of preoperatively performed CT, the results of which was reported with the method of service purchase out of the hospital, and postoperative pathology results were examined and compared.

**Results:** Of 161 patients who were operated with the pre-diagnosis of AA, 80 were male and 81 were female. Their mean age was 34.7 (17-83) years. In 137 (85.1%) of the patients, the result of postoperative pathological evaluation was reported as appendicitis. While postoperative pathology result was appendicitis in 111 of 115 patients found to have appendicitis in CT, it was reported as normal in 4 patients. Of 46 patients that were reported to have normal appendix according to CT, 20 had normal appendix, but 26 had appendicitis. When the CT reports and postoperative pathology results were compared, the sensitivity and specificity for CT were detected to be 81% and 83%, respectively.

Acute appendicitis is one of the pathologies frequently encountered in the etiology of abdominal pain and most commonly requiring emergency abdominal surgery. Appendicitis is diagnosed by clinical examination and by the support of radiological

examinations in suspicious cases. In the literature, CT has a high sensitivity of 96.7% and a high specificity of 95.9% in diagnosing appendicitis. For the sensitivity and specificity rates of CT to be high, the surgeon and the radiologist should work in cooperation.

**Conclusion:** At the diagnosis of AA, CT has high accuracy and sensitivity rates. On the other hand, in our series, the diagnostic success rate of CTs reported through service purchase was found to be lower compared to the rates in the literature. For increasing diagnostic value of CT, radiologists and surgeons should be able to communicate. When CT is reported through service purchase, its diagnostic value decreases.

**Keywords:** Acute appendicitis, computed tomography, service purchase

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## PP-0094 [Emergency Surgery and Trauma]

# Can Biochemical Markers Be Useful in the Preoperative Evaluation of the Clinical Stage of Acute Appendicitis?

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**Objective:** Acute appendicitis, which is the most common cause of emergency surgery, is encountered with various clinical forms including catarrhal, suppurative, gangrenous, and perforated appendicitis. The preoperative detection of these clinical conditions, which are effective on the patient's antibiotherapy, duration of operation, duration of hospitalization, and complications, and making the operation and treatment planning according to these clinical definitions will have a decreasing effect on the reduction of postoperative complications. In this study, we aimed to determine the role of biochemical tests, which can be done in the emergency service in the preoperative period and are affected by inflammatory changes, in the determination of the clinical picture of acute appendicitis.

**Material and Methods:** Patients who underwent appendectomy with the diagnosis of acute appendicitis in our clinic between January 2015 and December 2017 were included in the study. Our study was designed as a retrospective multiple comparison test. The relationship between preoperative CRP, WBC, neutrophil, and RDW values and histological findings and the stage of acute appendicitis was investigated.

**Results:** The study included 450 patients that were performed appendectomy due to the diagnosis of acute appendicitis between January 2015 and December 2017. The mean age of the patients was  $31.9 \pm 11.5$  years and the female/male ratio was 283/167. Histopathological examination of 34 patients was reported as perforated appendicitis. In the patient group with perforation, the mean CRP value was  $71.1 \pm 89.8$  mg/l and WBC was  $15.352 \pm 5653$  103/uL. Shift to left in neutrophil value was observed in all of these 34 patients. The mean value of RDW was detected as  $15.3\% \pm 1.3$ . Preoperative CRP, WBC, neutrophil, and RDW values of patients with perforation were significantly higher than in the other patients ( $p < 0.05$ ). With the Chi-square test, each parameter was shown to be a marker of perforation. The high values of CRP and RDW demonstrate perforation more clearly than using a single test.

**Conclusion:** In the diagnosis of acute appendicitis, an increase is observed in all inflammatory parameters, especially in the case of perforation. Instead of evaluating a single parameter, evaluating multiple parameters together can give more detailed and sensitive information about the severity of the disease. In our study, we found that the coexistence of elevated CRP and RDW values was more specific for the diagnosis of perforated appendicitis rather than the diagnostic effect of individual tests. The high values of CRP and RDW can be guiding in determining the severity of disease and surgical strategy.

**Keywords:** Acute appendicitis, biochemical marker, perforation

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## PP-0095 [Emergency Surgery and Trauma]

# Our Experience of Appendectomy in a District Hospital

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**Objective:** Acute appendicitis continues to be the most common cause of acute abdomen in general surgery. In this study, it was aimed to evaluate the importance of physical examination, laboratory analyses, and imaging methods in the diagnosis of acute appendicitis.

**Material and Methods:** The files of 32 patients who underwent appendectomy in Bor State Hospital between June 2017 and January 2018 were reviewed retrospectively. The patients were evaluated in terms of physical examination findings, WBC and CRP values, the results of imaging techniques, and pathologic diagnoses.

**Results:** The patients were at the age range of 16 and 71 years. The mean age was calculated as 30.4 years. Of 32 patients, 18 (56%) were female and 14 (44%) were male. While 24 (75%) patients had findings that would support the diagnosis of acute appendicitis in laboratory analyses, 8 (25%) patients had normal values. In 30 (94%) patients, imaging technique was used to confirm the diagnosis preoperatively. In 2 (6%) patients, appendectomy was performed by considering the acute appendicitis according to examination and laboratory findings without the result of imaging method. In 32 (100%) patients, examination findings suggesting acute appendicitis were observed. When the pathology results were examined, 30 (94%) patients were diagnosed with acute appendicitis at histopathological level, and 2 (6%) patients were reported to have normal appendiceal vermiformis. In one of the 2 patients who were not diagnosed with acute appendicitis according to the result of pathology, the result of imaging technique supported the pre-diagnosis of acute appendicitis. In the other patient, preoperative imaging technique was not performed. In 1 (3%) patient undergoing appendectomy based on physical examination and laboratory findings, whose imaging technique did not suggest acute appendicitis, the pathological diagnosis was reported as acute appendicitis. Except this patient, the results of ultrasonography or computed tomography in all patients undergoing imaging technique before appendectomy were reported as acute appendicitis.

**Conclusion:** The importance of physical examination, laboratory tests, and imaging techniques in the diagnosis of acute appendicitis is known. When the results obtained in our study are evaluated, it can be said that imaging methods are more reliable for the diagnosis of acute appendicitis than laboratory tests, although all three are important. Physical examination is still the most valuable element in the diagnosis of acute appendicitis.

**Keywords:** Acute appendicitis, appendectomy, diagnostic techniques

## PP-0096 [Emergency Surgery and Trauma]

# Case Report: Acute Appendicitis in a Patient with Situs Inversus

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**Introduction:** Acute appendicitis is one of the most common gastrointestinal emergencies. Its diagnosis is established with the help of clinical symptoms and imaging techniques. Clinical findings may not be at the expected level due to the localization of the appendix, which may lead to delayed diagnosis of acute appendicitis. The appendix can have retrocecal, pelvic, subcecal, preileal, postileal, subhepatic, mid-inguinal, and rarely left-sided localization. Left-sided appendix can be due to two types of congenital anomalies, situs inversus totalis and intestinal malrotation. Situs inversus totalis is a rare congenital anomaly with an incidence of 0.01%, characterized by complete transposition of the thoracic and abdominal organs. The etiology of this anomaly is unknown, but it is assumed that an autosomal recessive defect is predisposing in the long arm of the 14th chromosome. People with the anomaly of situs inversus totalis usually live a normal life without being aware of their condition until they are incidentally diagnosed during an imaging technique performed for an emergency surgical situation. The differential diagnosis in these patients is very difficult because of the unusual findings of physical examination.

**Case:** A 26-year-old male patient was admitted to the emergency room with a complaint of diffuse abdominal pain in the region of umbilicus that had started few hours ago. In the emergency service, laboratory tests were performed and the patient was considered to have no acute situation. Upon that, he was given medical treatment and discharged. When the complaints of the patient were not resolved and the pain moved to the left lower quadrant, he was re-admitted to the emergency unit. In the physical examination of the patient who was consulted to our department, severe tenderness, defense, and rebound were detected in the left lower quadrant. His WBC value was 12.8 K/uL. Because the PA chest X-ray demonstrated dextrocardia, abdominal CT was performed with the pre-diagnosis of situs inversus totalis and acute appendicitis. It was observed in the imaging that the patient had situs inversus totalis anomaly and the appendix was hyperemic and edematous, and its environment was contaminated. The appendectomy procedure was performed by entering the abdomen with Elliot's incision on the left side.

**Conclusion:** In the differential diagnosis of abdominal pain in the left lower quadrant, diverticulitis, renal colic, ovarian cyst rupture, Meckel's diverticulitis, incarceration, or strangulated inguinal hernia, psoas abscess, and rarely acute appendicitis due to left-sided appendix should be taken into consideration. In the literature, the incidence of acute appendicitis with situs inversus totalis is specified to be between 0.016% and 0.024%. The diagnosis of thyroid inversus totalis can be easily made by examinations such as PA chest X-ray, ultrasonography, and computed tomography. In this case, we established the diagnosis through PA chest X-ray and abdominal CT. In these patients, surgical interventions to be performed after the diagnosis of situs inversus totalis do not differ provided that they should be performed from the reverse side.

If the findings of physical examination are consistent with acute abdomen in patients admitted due to left lower quadrant pain, left-sided acute appendicitis should definitely be considered. This will avoid potential delays in diagnosis and possible morbidity and mortality.

**Keywords:** Situs inversus totalis, acute appendicitis, acute abdomen, dextrocardia

## PP-0097 [Emergency Surgery and Trauma]

# The Use of a Thermal Camera in the Diagnosis of Acute Appendicitis, which is the First in Literature

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**Objective:** Acute appendicitis is the most frequently consulted acute abdominal disease in emergency departments and it may cause serious surgical morbidity and even mortality due to complications that may develop intra-operatively and post-operatively in diagnostic and/or surgical interventional delays. Currently, there are real effective diagnostic tools for the diagnosis of acute appendicitis, and the diagnosis of appendicitis is based on clinical examination, laboratory findings, and abdominal ultrasonography. In addition, scoring systems, abdominal x-rays, computed tomography, magnetic resonance imaging, and diagnostic laparoscopy are also used for diagnosis. In this study, it was aimed to determine whether thermal camera is a good new diagnostic tool for acute appendicitis with the detection of minimal temperature changes on the skin surface in the reflected abdominal region, which may be due to intraabdominal inflammation in acute appendicitis, by thermal imaging.

**Material and Methods:** After approval by the Clinical Studies Ethics Committee, prospective data and thermal imaging camera records including surgical and pathological findings of 51 consecutive patients with the diagnosis of acute undergoing appendectomy due to the diagnosis of acute appendicitis by the same general surgeon between January 2013 and January 2015 were obtained. In addition to the findings obtained in the initial examination at the emergency unit, simultaneous body temperature, preoperative thermal camera views, peroperative findings of the abdominal skin surface, and pathological findings of the appendiceal tissue were also evaluated. Hand-held infrared thermal imaging cameras were used for measurements.

**Results:** The mean age of the patients was  $27.4 \pm 7.5$  years (18-55) and 30 of them were male. While 12 of the patients had the highest temperature measured on the epigastric area, 17 had in the umbilical area. Epigastric and umbilical areas constituted 56.9% of patients. The lowest temperature measurement on the anterior wall of the abdomen was observed in the hypogastric region in 15 patients and in the right inguinal region in 10 patients, and the rate of the patients in these two areas was 49%.

**Conclusion:** This work is the first literature study on infrared thermal camera imaging used as a new diagnostic tool in the diagnosis of acute appendicitis. When the results of the study are taken into account, the thermal imaging camera used in this study is far from being a new diagnostic tool for acute appendicitis and it may be suitable for the determination of superficial inflammation, but not for deep inflammation. Because of the insufficiency of infrared thermal camera imaging for evaluating the body in depth, its usefulness for acute intraabdominal inflammation is limited. These methods may be promising for the future if temperature changes in deep tissues are visualized as a result of developing technology.

**Keywords:** Acute appendicitis, acute inflammation, infra-red imaging, diagnostic tool, thermal camera.

## PP-0098 [Emergency Surgery and Trauma]

# Renal Artery Thrombosis and Hypercoagulability Developing after a Blunt Trauma: Case Report

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**Introduction:** Renal Artery Thrombosis (RAT) is a rare condition that can cause renal parenchymal loss. It frequently develops secondary to heart valve diseases and heart rhythm disorder. It can also be seen after trauma. It is a rare condition the diagnosis of which is often overlooked because of nonspecific findings. In this report, a case of renal artery thrombosis detected after a traffic accident was presented.

**Case:** A 31-year-old male patient was admitted to the emergency room with the complaint of abdominal pain within 1-2 hours after trauma. The general condition of the patient evaluated in the emergency department was good, he was conscious and cooperative. His vital signs were normal. The physical examination revealed no additional finding other than right hypochondriac and right lumbar tenderness. There was no feature on his history. In the laboratory analysis, HGB was 15.2, WBC was 12.8, BUN was 15, CR was 1.2, and LDH was 904 and other routine values were usual. In the complete urinary analysis, hemoglobinuria (+++), proteinuria (+), and 51 erythrocytes were present. The results of coagulation tests were normal. Abdominal CT revealed thrombus material in the right renal artery. Perfusion was not observed in the right renal parenchyma. The appearance of the thrombus material at the proximal area of the celiac truncus, allowing passage to the distal part, was observed. Considering the present findings, the patient was started low-molecular-weight heparin treatment. In the clinical follow-up, no invasive intervention was required for the patient because his vital signs were stable and his pain regressed. The patient was consulted to the



department of genetics for his susceptibility to hypercoagulopathy. The coexistence of PAI-1 4G/4G allelic structure and MTHFR A1298C heterozygous structure were detected in laboratory tests. This polymorphism was thought to be responsible for right renal artery thrombosis. In the control Doppler USG, no thrombus in the celiac truncus lumen was observed. The patient without additional pathology in the follow-ups was discharged with oral anticoagulant therapy. At the fifth month of his follow-up, the patient is taking oral anticoagulant and continues the control examinations in the outpatient clinic of hematology.

**Conclusion:** RAT is rarely seen important clinical condition, the diagnosis of which can be delayed due to its non-specific clinical and laboratory findings and therefore, can result in renal parenchymal loss. Trauma is rarely the cause of this condition. Its clinical presentation and laboratory findings can be nonspecific. The most important biochemical parameter showing renal infarction is not specific but increase in LDH level. The diagnosis is established with renal angiography or contrast-enhanced abdominal CT. The primary treatment for renal artery thrombosis is anticoagulant therapy. Treatment options other than anticoagulant therapy include percutaneous transcatheter aspiration, embolectomy, and nephrectomy. The use of surgical treatments is currently limited because they cause high morbidity and they provide limited preservation of the renal tissue. Therefore, conservative treatments should be considered instead of surgical treatment. These patients should also be carefully evaluated in terms of hereditary factors causing hypercoagulopathy. Although trauma is a rare cause in the etiology, it is important to keep the renal artery thrombosis in mind in the differential diagnosis of patients who present with abdominal pain after trauma.

**Keywords:** Blunt trauma, renal artery thrombosis, hypercoagulability

## PP-0099 [Emergency Surgery and Trauma]

# A Rare Cause of Ileus: Isolated Cecal Necrosis

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**Introduction:** Isolated cecal necrosis (ICN) is a condition that is rarely seen in the elderly people. It can be confused with acute appendicitis and other causes of acute abdomen particularly in elderly patients. It is extremely difficult to diagnose ICN in the preoperative period. Delayed diagnosis and treatment may cause sepsis and death due to necrosis developing as a result of progress in intestinal ischemia. In this study, it was aimed to present a patient who was operated for the pre-diagnosis of ileus and diagnosed with acute partial cecal necrosis in the light of current literature.

**Case:** A 74-year-old male patient was admitted to the emergency unit with the complaints of abdominal pain that started 36 hours ago and gradually increased, loss of appetite, nausea, and vomiting. The patient had a history of chronic artery disease (CAD), chronic obstructive pulmonary disease (COPD), and chronic renal failure (CRF) for 5 years and he was using aspirin, isosorbide dinitrate, and salbutamol. In the abdominal examination of the patient, distension, tenderness, defense, and rebound were detected in all quadrants. The leukocyte count of the patient was 13,800/mm<sup>3</sup>. The hemoglobin value was 6.9 gr/dl, creatinine was 3,27 mg/dl, CRP was 193 mg/l, and other results were normal. The abdominal x-ray of the patient showed multiple air fluid levels in the small intestine. The patient's oral intake was stopped and a nasogastric catheter was placed. Fluid including small intestine content was observed. The patient underwent an emergency operation with the pre-diagnosis of ileus. In the exploration performed with supra and subumbilical incision, it was observed that the small intestine loops were dilated and three isolated ileal loops were adhered on the cecal wall in the right lower quadrant of the abdomen. After the adhesions were separated with sharp and blunt dissections, the appendix was in normal appearance. Necrosis was seen in an approximately 5 cm segment on the anterior wall of the cecum. There was no tumoral mass. It was observed that there was an abscess on the necrotic area secondary to serosal fat necrosis, and the omentum and related ileal loops adhered to the cecal wall and caused dilatation in its proximal region. The patient was performed right hemicolectomy. Although the patient did not have any intra-abdominal complications during intensive care follow-ups in the postoperative period, he died on the postoperative 11th day because of acute renal failure and cardiac arrhythmia developing on the ground of CRF. In the pathological evaluation, transmural infarction, fibrin thrombi in small veins, and fat necrosis in the serosa were reported.

**Conclusion:** The etiology of isolated partial cecal necrosis is not fully understood, but it is a rare cause of acute abdomen reported to develop in those with atherosclerotic heart disease or in association with hypotension attacks seen after hemodialysis. It is difficult to diagnose it preoperatively. In the tomography of the abdomen, thinning of cecal wall and isolated pneumatosis coli can be seen. However, our patient could not be performed intravenous contrast-enhanced tomography due to the presence of acute renal failure. Since the findings of the patient were consistent with ileus, emergency laparotomy decision was taken. The treatment of partial cecal necrosis is surgical. Depending on the size of the cecal necrosis and the presence of peritonitis findings, partial resection of the affected cecal area, segmental colon resection, or right hemicolectomy may be performed. Most authors claim that right hemicolectomy should be reliably chosen because a partial resection of cecum is risky. In our case, the patient underwent right hemicolectomy.

**Keywords:** Cecal necrosis, hemicolectomy, ileus, abdominal pain

## PP-0100 [Emergency Surgery and Trauma]

# A Rare Cause of Mechanical Bowel Obstruction: Endometriosis

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**Introduction:** Endometriosis is the condition in which the endometrial tissue is outside the uterine cavity. It is commonly observed in women at reproductive age. Ectopic endometrial foci are most commonly seen in the ovaries but rarely in the intestinal organs. Intestinal endometriosis can be localized in the ileocecal region, even if it is frequently seen in rectosigmoid and rectovaginal septum. In this article, we wanted to describe the surgical approach in two cases developing mechanical bowel obstruction due to intestinal endometriosis.

**Case 1:** A 21-year-old female patient admitted to the emergency unit with abdominal pain, nausea and vomiting stated that her menstrual period started 3 days ago and her abdominal pain increased gradually. Her abdominal examination revealed distension and defense in all quadrants. The drainage of intestinal content was performed on the patient inserted a nasogastric catheter. The patient with elevated CRP and leucocytosis had a large number of small intestinal air fluid levels in the abdominal radiography. Emergency exploration decision was made upon the increased wall thickness obstructing the passage of the terminal ileum in abdominal tomography. Endometriosis foci causing adhesion on the ileum were observed at the 20 cm proximal regio of the ileocecal valve and small intestinal resection and anastomosis were applied to the pathological area. The patient was uneventfully discharged on the postoperative 6th day. The pathological result was reported as foci of endometriosis.

**Case 2:** In the abdominal examination of a 33-year-old female patient who was admitted to the emergency unit due to the complaints of abdominal pain, nausea and vomiting in the menstruation period, distension was detected. A nasogastric catheter was inserted and intestinal drainage was performed. There was diffuse small intestinal air fluid levels in the abdominal radiography of the patient having leucocytosis. The patient underwent an emergency operation because of massive lesion that did not allow passage in the cecum. In the exploration, the endometrial foci and adhesions occluding the cecum and terminal ileum were observed. The patient was performed ileotransversostomy after ileocecal resection. The patient was uneventfully discharged on the 7th postoperative day. The result of pathological evaluation was reported as endometriosis foci.

**Conclusion:** Symptoms seen in intestinal endometriosis may be pelvic pain particularly increasing in the menstrual period, constipation, or recurrent diarrhea. Hormonal therapy has no corrective effect on mechanical obstruction symptoms. Resection of the affected intestinal segment and anastomosis are the best accepted approaches in patients with intestinal endometriosis. In these two cases, bowel obstruction was present and surgical treatment was performed.

Intestinal endometriosis is rare but may cause mechanical bowel obstruction. For this reason, it should be remembered in the presence of mechanical intestinal obstruction findings especially in women of reproductive age and it should not be forgotten that surgery is the first choice in its treatment.

**Keywords:** Endometriosis, ileus, mechanical intestinal obstruction

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## PP-0101 [Emergency Surgery and Trauma]

# Indication for Emergency in Diaphragmatic Hernias; Incarceration

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**Introduction:** The congenital diaphragmatic hernia is a congenital disorder with high mortality and characterized by the protrusion of abdominal organs from the posterolateral defect in the diaphragm into the thoracic cavity. The most common type of congenital diaphragmatic hernias is the Bochdalek Hernia, which accounts for 85-90% of cases. Most cases become symptomatic after birth and are diagnosed at this time. In rare cases, there are cases of Bochdalek Hernia who are asymptomatic until the adulthood. In this article, we aimed to present a 71-year-old patient who was urgently operated due to Bochdalek hernia in our clinic.

**Case:** A 71-year-old male patient presented with sudden onset abdominal pain, vomiting and respiratory distress. The patient had epigastric tenderness in the abdominal examination, and the nasogastric tube that was inserted in the emergency service had gastric contents without bile. In the blood analysis, the value of leukocyte was 19000/uL and crp was 18.2mg/dl. In the evaluation of thoracoabdominal tomography taken by considering acute abdomen, she was reported to have Bochdalek hernia and the corpus of the stomach and omental tissue was herniated and incarcerated. The patient was taken into emergency operation

and the exploration revealed a 7x5 cm Bochdalek hernia and the omental tissue and stomach corpus were herniated from this area. The herniated omental tissue and stomach corpus were taken into the abdomen. Because the herniated omental tissue was necrotic, omentectomy was performed. Resection was not applied since the blood supply to the stomach was normal. The repair of the diaphragm was properly carried out. The operation was terminated by putting dual patch on the repaired area.

**Conclusion:** Although congenital diaphragmatic hernias are frequently diagnosed during the neonatal period, its incidence in adults has been reported to be 0.17% in a study. In cases with the sudden onset of respiratory distress, abdominal pain and signs of obstruction in the gastrointestinal system, Bochdalek hernia should not be forgotten and emergency surgical treatment should be planned because the risk of complication risk is high in large hernias including abdominal organs.

**Keywords:** Bochdalek, diaphragm, hernia, incarceration

## PP-0102 [Emergency Surgery and Trauma]

# A Rare Case: Isolated Superior Mesenteric Venous Injury Due to a Blunt Abdominal Injury

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**Introduction:** As a result of blunt and penetrating abdominal trauma, primarily solitary and luminal organs are injured. Intraabdominal vascular injuries due to blunt abdominal traumas are rarely seen. It is very difficult to visualize the superior mesenteric venous (SMV) and portal venous injuries in emergency conditions.

**Case:** A 62-year-old male patient was admitted to emergency service with blunt abdominal trauma due to low-speed in-vehicle traffic accident. In the ultrasonography performed under urgent conditions, the presence of diffuse fluid in the abdomen and suspected liver injury were reported. The patient was performed emergency laparotomy and an approximately 6 cm injury in the inferior part of the transverse colon mesentery and in the mesenteric root of the small intestine and a hematoma around it were detected. Also venous hemorrhage was seen. Under the splenic vein junction on the SMV, there was an avulsion tear and defect of about 15 mm in length, which was thought to be associated with the traction of the lateral branches. End-side vessel anastomosis and primary repair were performed with 5/0 prolene sutures. In the postoperative period, the patient was followed up in intensive care unit for 2 days and oral ingestion with liquid foods was started after 2 days. CT angiography and Doppler ultrasonography were used to follow the SMV and portal vein flows. The patient was discharged on the postoperative 12th day with appropriate anticoagulant therapy. No pathology was observed in SMV and portal vein during the 6-month follow-up.

Isolated SMV injury due to blunt abdominal trauma has rarely been reported. Treatment options for SMV injuries are controversial. At least 5 treatment modalities including ligation, lateral repair, end-to-end anastomosis, and autologous and prosthetic grafts have been described. Simple ligation should be preferred in patients with unstable condition and/or multiple injuries due to possible venous congestion and similar complications. Although the preference of venous repair methods in mesenteric venous injuries is technically more difficult, it will be anatomically and functionally more accurate. Patients with irrepressible small bowel edema due to the development of thrombosis in the collaterals and SMV after venous ligation have been reported and it has been observed that the return of the gastrointestinal system to its normal functions can require more time and can also cause the development of ischemia. In another respect, patients with thrombosis and small bowel necrosis developing after SMV resection and end-to-end anastomosis have also been reported. Although we did not encounter a similar condition in our patient, we were aware of that we should not overlook a similar complication.

**Conclusion:** SMV injuries after blunt abdominal trauma have high mortality due to difficult diagnosis and difficulty in the isolation of the injured structures although they are quite rare. Ligation is a preferable method in patients who can not achieve hemodynamic stability; however, collateral development's being time-consuming and the occurrence of small bowel edema and congestion are important handicaps. We believe that the use of vascular repair techniques by experienced surgeons in hemodynamically stable patients is important for the continuity of anatomical and functional integrity.

**Keywords:** Blunt abdominal trauma, superior mesenteric venous injury, anastomosis

## PP-0104 [Emergency Surgery and Trauma]

# Mesenteric Torsion Associated with Mesenteric Cyst

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**Introduction:** To present a case report on the treatment of the acute abdomen picture caused by rarely seen mesenteric cyst and mesenteric torsion with laparoscopic surgery, case report.

**Case:** A 41-year-old male patient had no history of a previous operation. It was suggested to follow the diagnosis of mesenteric cysts 3 years ago. The patient admitted due to increased abdominal pain was performed ultrasonography and tomography for the diagnosis of ileus. It was observed that there was a 74x100 mm cystic lesion in the middle right abdominal region and torsion of the small intestine in the lower levels. His general condition was good. There was diffuse tenderness and defense in the abdomen, but no rebound. Other physical examination findings were normal. There was no abnormality in the laboratory findings. The patient was hospitalized and applied laparoscopic mesenteric cyst excision, small bowel mesotorsion correction, and appendectomy. The patient who did not develop postoperative complications was discharged with the recommendations.

Video: Treatment of mesenteric torsion associated with mesenteric cyst with laparoscopic surgery, case report.

**Conclusion:** Rarely seen mesenteric cysts can be localized anywhere in the abdomen, most commonly in the small intestine mesentery and especially in the ileum. Abdominal ultrasonography, computed tomography and magnetic resonance imaging are modalities used in its diagnosis. Its treatment is excision. Unless a definite contraindication is found, laparoscopic surgery is safely performed in the treatment of mesenteric cysts.

**Keywords:** Laparoscopy, mesenteric cyst, mesotorsion

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## PP-0105 [Emergency Surgery and Trauma]

# Duplication of the Appendix Accompanied by Acute Appendicitis

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**Introduction:** Acute appendicitis is the most common non-traumatic pathology requiring emergency surgery and it has been reported that the lifetime risk of acute appendicitis is about 7% in the general population. Duplication of the appendix vermiformis is a rare congenital anomaly and it is usually detected incidentally during laparotomy. The duplication of the appendix is detected in only 1/25000 (0.004%) of patients operated due to acute appendicitis. Up to now, there are about 100 cases reported in literature. In this study, we aimed to present a case of appendix duplication in a patient with kidney transplantation, who was operated for acute appendicitis.

**Case:** A 56-year-old female patient with a history of renal transplantation 10 years ago was admitted to the emergency service due to the complaints of abdominal pain, fever, and vomiting going on for two days. In the physical examination, there was defense and rebound in the right lower quadrant and suprapubic region. Her body temperature was 37.8°C and the other hemodynamic parameters were within normal intervals. In the laboratory analysis, the white blood cell count was 17,750 mm<sup>3</sup> and other values were in normal range. Upon the findings consistent with acute appendicitis in the non-contrast enhanced abdominal tomography, the patient was taken into an operation. In the exploration, TYPE B2 appendix duplication according to the Wallbridge classification was observed. While one of two appendices had acute inflammation findings, the other had a normal appearance. Appendectomy was performed for both appendices and the patient was discharged on the postoperative 4th day. The result of pathological evaluation confirmed the duplication of appendix accompanied by acute appendicitis.

**Conclusion:** The duplication of the appendix was first described by Picoli in 1892 in a female patient with double uteruses, double colons, and double vaginas. The etiology of three appendices duplication has not been fully explained. Appendix duplications are usually detected incidentally during surgery for acute appendicitis and it was identified in our case in the same way. Appendectomy for both appendices is necessary in order to properly assess the clinical problems of patients for subsequent abdominal pain.

**Keywords:** Duplication of the appendix, acute appendicitis, kidney transplantation, appendectomy

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## PP-0106 [Emergency Surgery and Trauma]

# Treatment of Biliary Leakage in a Liver Injury Caused by a Gunshot through Vacuum-Assisted Closure System: Case Report

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**Introduction:** Large-scale tissue loss occurs in high-energy firearm injuries, and tissue necrosis almost always sets the stage for infection. Bacterial burden of the affected organ in abdominal injuries can increase the severity of the infection. Open surgery, percutaneous drainage, and endoscopic procedures have been described in the management of the biliary leakage developing after liver trauma. In this study, we present the treatment of a case with biliary leakage associated with liver resection in a patient who had extensive tissue loss in the back and abdominal region due to gunshot injury with vacuum assisted closure system.

**Case:** A 29-year-old female patient was evaluated for pump action shotgun injury. She had hypotension and tachycardia. 4-cm diametered bullet entry holes on the 5-6-7<sup>th</sup> ribs on the midclavicular line on the right side and bullet exit holes on the 7-8-9<sup>th</sup> ribs on the back were observed. There were bullet entry and exit holes also in the right posterior superior iliac spine and the inguinal ligament inferolateral part. There was an open comminuted fracture in the right knee and an open wound on the left arm. The patient was taken into an urgent surgery. The abdomen was opened with J incision. There were full rupture in the 6<sup>th</sup> and 7<sup>th</sup> segments of the liver and contusion in the 5<sup>th</sup> and 8<sup>th</sup> segments of the liver. Because the bleeding could not be controlled, segmental liver resection was applied. Four drains were intraabdominally placed. The bullet holes were debrided. Debridement procedure on the open wounds on the leg and arm and external fixation on the knee were performed. On the postoperative 2<sup>nd</sup> day, low-flow biliary leakage was detected in the abdominal drain. On the 5<sup>th</sup> postoperative day, wide debridement was performed because of the detection of necrotising fasciitis extending from the iliac crest on the right side to the level of 5<sup>th</sup> rib on the back. It was seen that the bile did not come to the abdominal drains and fistulized from the line formed by the bullet into the open wound in the thoracolumbar region. The previously planned ERCP procedure was not applied since the bile was taken under control with the vacuum assisted closure system. After the patient's open wound was repaired with a skin graft, the patient was discharged on the postoperative 51<sup>th</sup> day by requesting to visit the outpatient clinic of orthopedics for control examination.

**Conclusion:** The vacuum assisted closure system is effective in controlling the biliary leakage fistulized into the wound as well as in treating infected wounds with large tissue losses.

**Keywords:** Gunshot injury, liver injury, biliary leakage, VAC, vacuum-assisted closure system

**PP-0107 [Emergency Surgery and Trauma]****Factors Affecting the Prognosis of Necrotising Fasciitis**

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**Objective:** Necrotizing fasciitis (NF) was first described by Fournier in 1883 and it is a polymicrobial aggressive infection of subcutaneous tissue and fascia. Mortality rates in early detection and treatment failure are 25-35%. Aggressive surgery, debridement, and appropriate antibiotherapy are essential procedures for its treatment. The LRINEC (Laboratory Risk Indicator for Necrotising Fasciitis) score was developed to facilitate the differential diagnosis of NF and simple soft tissue infections such as erysipelas and cellulitis, consisting of 6 parameters (CRP, leukocyte count, hemoglobin, sodium, creatine, glucose). The scores of 6 and above are helpful in diagnosing NF with 92% sensitivity and 96% specificity. The Wang & Wong classification is a staging system in which skin changes are chronologically identified in the course of NF (Stage 1: erythema on the skin, Stage 2: bullous formation, Stage 3: crepitation). The aim of our study is to determine prognostic factors for better planning of appropriate treatment in cases developing NF.

**Material and Methods:** Of 33 patients treated for NF in the department of general surgery in our hospital between the years of 2011 and 2016, 30 patients whose data were fully obtained were included in the study. Patients' ages, comorbid diseases, duration of hospitalization, duration of stay in the intensive care unit, and recent conditions were recorded. Statistical analyses were performed by using SPSS 20 software.

**Results:** The mean age of the patients was 57.5 (20-81) years. The ratio of male to female was 17/13. NF occurred in association with perianal abscess in 14 patients, pilonidal sinus abscess in 3 patients, elective surgery in 10 patients, and emergency surgery in 3 patients. Of the patients, 50% had diabetes mellitus. Tissue culture was positive in only 12 (40%) patients. The most commonly growing microorganisms were *E. coli*, *Acinetobacter* spp, and *P. aeruginosa*. The mean LRINEC score was 8.5±2.8. There was a significant correlation between patient age and LRINEC Score ( $p=0.018$ ,  $R=0.43$ ). Although the patients with high LRINEC scores had longer duration of hospitalization, it was not statistical significant. The LRINEC scores of patients requiring intensive care were significantly higher than those who did not require intensive care ( $p=0.01$ ). Although the duration of hospitalization was longer in the patients with high Wang & Wong stage, it was not at the level of statistical significance. It was found that patients with high Wang & Wong stage were hospitalized in the intensive care unit for a significantly longer time ( $p=0.037$ ). Mortality was

seen in five patients (16.7%). When factors such as LRINEC Score, Wang & Wong stage, age, gender, and the presence of comorbidity, which could affect the survival, were analyzed, it was seen that only advanced age was significantly related to survival.

**Conclusion:** NF is more common in middle aged and male patients, and our findings are compatible with literature. In the literature, there are publications showing a negative correlation between LRINEC score and survival. In our study, a relationship between the LRINEC scores and survival was not detected, but patients with high LRINEC scores were found to have longer hospitalization in hospital and in intensive care unit. There was no significant relationship between survival and Wang & Wong stage, but it was found that advanced-stage patients were hospitalized in the hospital and intensive care unit for a longer time. In univariate and multivariate analyses, the only factor that significantly affected survival was advanced age.

**Keywords:** Nekrotising Fasciitis, survival, LRINEC score, Wang&Wong Stage

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## PP-0108 [Emergency Surgery and Trauma]

# A Rare Complication after Appendectomy: Stump Appendicitis

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**Introduction:** Acute appendicitis is at the top of the causes of surgical acute abdomen. Wound site infection, intra-abdominal abscess, peritonitis, sepsis, ileus and rarely seen stump appendicitis are among the complications of appendectomy. Stump appendicitis is a picture characterized by the inflammation of the remnant appendix tissue in cases where appendectomy is performed incompletely. It was first described by Dr Rose in 1945. While the incidence of acute appendicitis in the normal population has been reported to be 7%, the incidence of stump appendicitis has been reported to be 1/50000.

**Case:** Our patient was a 35-year-old male patient. He was admitted to the emergency unit due to the complaints of abdominal pain, nausea, vomiting, and loss of appetite that started 36 hours ago. The temperature on admission was 37.5°C, and there was a right Mc Burney incision scar associated with appendectomy performed 4 years ago. The patient had tenderness, rebound and defense in the right lower quadrant. In the laboratory analysis, the white blood cell count was 16000/mm<sup>3</sup>. Abdominal computed tomography revealed a blunt ending tubular intestinal segment with a diameter of 14 mm in the right lower quadrant, contamination of the surrounding tissue, and an abscess with a diameter of 26x20 mm. An operation was planned with the diagnosis of stump appendicitis. The operation was started as laparoscopic, but switched to open surgery due to past surgery-related adhesions. Peri-appendicular abscess drainage was performed. An inflamed and perforated 4 cm appendix tissue was detected at the distal area of the cecum. The appendix was isolated until the cecal junction and appendectomy was carried out. On the postoperative 3rd day, the drain of the patient was removed. He was discharged on the 5th day with full recovery.

**Conclusion:** Stump appendicitis is a rare complication that increases morbidity due to delayed diagnosis. As appendectomy, stump appendicitis also displays the clinical picture of acute abdomen. In our case, the findings of clinical and physical examination were consistent with acute abdomen. From radiological methods, CT is an important imaging technique in diagnosing stump appendicitis. In CT, findings such as increased diameter of stump appendicitis, increased density in surrounding tissues, free fluid around the cecum, and abscesses can be seen. In our case, stump appendicitis and abscess around it were observed. In the cases of stump appendicitis, the time of discharge is longer than in the normal appendicitis cases because of the complications that may accompany. There were abscesses and perforation in our case and he was discharged on the postoperative 6th day. Leaving a stump longer than 5 mm in appendectomy may cause obstruction and inflammation by forming a reservoir for the fecaloid. In our present case, the stump length was 4 cm and there was fecaloid. Stump appendicitis may occur due to subserosal or retrocecal anatomic variations of the appendix, intense inflammation, and inexperience of the surgeon. Despite the history of appendectomy, the diagnosis of stump appendicitis should be considered in patients admitted with the clinic of acute appendicitis such as right lower quadrant pain and peritonitis signs. Early diagnosis and treatment of stump appendicitis are important to reduce possible complications and morbidity.

**Keywords:** Appendix, appendicitis, stump appendicitis, appendectomy

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## PP-0109 [Emergency Surgery and Trauma]

# Incidentally Detected Tumors of the Appendix

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**Objective:** Tumors of the appendix are usually asymptomatic and incidentally detected during appendectomy or other abdominal operations. Less than 3% of patients undergoing appendectomy have a primary appendiceal tumor. In this study, we aimed to discuss the characteristics of 5 patients who were operated due to acute appendicitis and incidentally found to have a tumor of the appendix in our clinic with literature.

**Material and Methods:** In the study, 585 patients who underwent laparoscopic and open appendectomy with the pre-diagnosis of acute appendicitis in the General Surgery Department of İzmir Katip Çelebi University, Atatürk Training and Research Hospital between 01.01.2016 and 31.12.2017 were investigated. Five patients whose pathological evaluation was reported as appendix tumor was included in the study. Patients' demographic characteristics, histopathologies, clinical findings, surgical findings, and follow-ups were retrospectively analyzed.

**Results:** Of 5 patients, 3 were female and 2 were male, and their mean age was 50 years. Clinical findings of all patients were found to be consistent with acute abdomen. There were leukocytosis in four cases and leukopenia in one case. The CRP value was high in all cases. In three cases, USG was reported as acute appendicitis and three cases were performed computerized tomography for diagnostic purpose. After physical examination, laboratory analyses, and imaging techniques, they were taken into operation due to the pre-diagnosis of acute appendicitis. All patients had open appendectomy. During the operation, appendectomy was performed in 4 patients and appendectomy and cecum wedge resection were performed in one patient. In the histopathological evaluation, pathological evaluation was reported as well-differentiated neuroendocrine in 2 patients and as low-grade appendiceal mucinous neoplasm in 3 patients. Right hemicolectomy was performed in 2 patients in their follow-ups. The 90-year-old patient died independently of the disease three months after the operation.

**Conclusion:** Acute appendicitis is the most common cause of admission to the emergency unit with the complaint of acute abdomen. Less than 3% of patients undergoing appendectomy have a primary appendiceal tumor. In our study, this rate was 0.85%. According to the 2010 World Health Organization (WHO) classification, appendiceal tumors are divided into two groups as epithelial and non-epithelial. Of these, 50% are carcinoid tumors and, more rarely, mucinous neoplasms in the second order. The term 'neuroendocrine tumor' is also used for carcinoid tumors. While the rate of carcinoid tumor is 0.6% in the literature, it was 0.3% in our study. If the tumor size is smaller than 1 cm, there is no possibility of metastasis, but the incidence of metastasis in tumors larger than 2 cm increases up to 20%. For this reason, right hemicolectomy is recommended for cases with tumor larger than 2 cm.

In conclusion, appendix tumors are often incidentally detected after appendectomy. Therefore, we want to emphasize that the follow-up of the pathology of each patient from whom surgical specimen is taken and who is performed appendectomy is very important for the patient's health and for us from legal aspect.

**Keywords:** Incidentally, appendix tumor, emergency

## PP-0110 [Emergency Surgery and Trauma]

# Is TAP Block Effective on Postoperative Analgesia in Acute Appendectomy Surgery?

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**Objective:** The transversus abdominis plane (TAP) block is a regional anesthesia technique that blocks the nerves of the anterior abdominal wall by performing local anesthesia on the neurofacial plane between the inner oblique and transverse abdominis muscles for lower abdominal surgery. In this study, we evaluated the efficacy of TAP block for postoperative analgesic requirement in patients undergoing open appendectomy.

**Material and Methods:** Of 20 adult patients undergoing open appendectomy, the TAP group (10 patients with right-sided TAP block) were performed ultrasound-guided unilateral TAP block with 20ml of 0.25% bupivacaine after standard anesthesia induction. The other patient group (10 patients) was administered general anesthesia in the standard procedure. In addition, all patients received regular acetaminophen and non-steroidal anti-inflammatory drugs in the postoperative period. Total number of analgesics at the postoperative 30th minute, 60th minute, and 24th hour at rest, the first analgesic time, and VAS values were evaluated.

**Results:** Ultrasound-guided TAP block significantly reduced postoperative additional analgesic requirement in the first 24 hours. Immediately after surgery, pain scores on the postoperative visual analogue scale also decreased in the TAP block group (3.5 at the 30th minute, 4.0 at the 60th minute, and 4.2 at the 24th hour) [4.8.2 at the 30th minute, 5.1 at the 60th minute, 4.5 at the 24th hour). No complications of TAP block developed.

**Conclusion:** Ultrasonography-guided TAP block is an effective method in the postoperative multimodal balanced analgesia regimen for patients undergoing open appendectomy.

**Keywords:** Appendectomy, TAP block, ultrasound

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## PP-0111 [Emergency Surgery and Trauma]

# Acute Hemorrhagic Cholecystitis in a Patient with Bernard-Soulier Syndrome

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**Introduction:** Bernard-Soulier Syndrome (BSS) is clinically characterized by giant thrombocytes, thrombocytopenia and prolonged bleeding time. The incidence is one in a million. Severe and life-threatening bleeding is rare and can usually occur during surgery or after trauma. Spontaneous bleeding is also rare. In this article, we aimed to present the diagnosis and treatment of acute hemorrhagic cholecystitis in a patient with the diagnosis of glioblastoma multiforme and BSS.

**Case:** A 57-year-old male patient was consulted from the department of neurosurgery where he was hospitalized due to a right upper quadrant pain that began two days ago. The patient had a known diagnosis of BSS for 5 years and a history of radiotherapy due to irresectable glioblastoma multiforme within the last 3 months. In the physical examination, there was tenderness on the right upper quadrant. In the laboratory tests, the values were normal except hemoglobin value of 11.8 g/dl and platelet count of 38000/mm<sup>3</sup>. In the imaging, a 12 cm-diametered mass in relation to the bile lumen in the right upper quadrant was seen and interpreted as suspicious in terms of pericholecystic abscess or gallbladder perforation. Laparotomy was planned for the patient with the pre-diagnosis of gallbladder perforation. Preoperative platelet replacement was performed. At the exploration, it was observed that the gallbladder was severely hydropic and the described lesion was hematoma associated with the bleeding into the sac wall, and cholecystectomy and drainage were performed. The patient was taken into the intensive care unit as intubated after the operation and no surgical complications were observed during the follow-up period. On the postoperative 72<sup>th</sup> day, the patient died because of respiratory problems. The result of pathology was reported as a gall bladder with intense hematoma in the wall and lumen of the sac.

**Conclusion:** Spontaneous intraabdominal bleeding is a rare complication in patients with hemorrhagic diathesis or receiving anticoagulant therapy. Hemorrhagic cholecystitis has been reported as a rare complication in patients with various hemorrhagic diathesis, especially hemophilia. On the other hand, hemorrhagic cholecystitis secondary to BSS has not been previously reported in the literature. It should be kept in mind that acute cholecystitis due to spontaneous hemorrhage may be seen in patients with BSS, and platelet replacement should be planned for the possibility of hemorrhage before surgical intervention.

**Keywords:** Bernard-Soulier syndrome, glioblastoma multiforme, hemorrhagic cholecystitis, hemorrhagic diathesis, cholecystectomy

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## PP-0112 [Emergency Surgery and Trauma]

# Clinical Significance of Neutrophil/Lymphocyte and Platelet/Lymphocyte Ratios in the Diagnosis of Appendicitis

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**Objective:** Despite many new evaluation methods such as scorings and algorithms apart from clinical findings and physical examination in the diagnosis of acute appendicitis, negative appendectomy continues to be relevant. Simple and repeatable laboratory tests that may be useful for diagnosis are important in clinical practice. When imaging methods used to be performed less and clinical findings used to play a more active role, neutrophil/lymphocyte ratio (NLR), which is questioned as an auxiliary method for the diagnosis of appendicitis, emerged as a parameter which could be easily calculated from the peripheral blood count and repeated. Recently, views in favor of its usage as an assessment parameter in cancer treatments and in infectious processes and inflammation conditions such as appendicitis have been reported. Likewise, platelet/lymphocyte ratio (PLR) and mean platelet volume (MPV) also play a role as a novel indicator of inflammation. In this study, NLR and PLR and MPV values were investigated for their clinical usage in the diagnosis of acute appendicitis.



**Material and Methods:** Prospective data of 1891 patients who were operated with the diagnosis of acute appendicitis in Fatih Sultan Mehmet Training and Research Hospital between January 2010 and January 2018 were retrospectively reviewed. Considering preoperative imaging and postoperative histopathological results, the helpfulness of NPL and PLR values in diagnosing acute appendicitis when used clinically was investigated.

**Results:** A total of 1891 patients, including 1249 male (66%) and 642 female (34%), with the mean age of 30 (17-84) years were included in the study. NLR, PLR, and MPV values were compared in detail considering pathological reports.

**Conclusion:** MPV ( $7,79 \pm 1,07$ ) and NLR ( $8,47 \pm 7,15$ ) values were statistically significantly higher in patients diagnosed with phlegmonous appendicitis than those with negative and early diagnosis of appendicitis ( $p < 0.01$ ). Likewise, the PLR value ( $155.82 \pm 110.04$ ) was statistically significantly higher at the phlegmonous appendicitis ( $p < 0.01$ ). However, there was no increase in an additional level expected with perforation ( $p > 0.05$ ). The fact that these values can be obtained from the blood count results already performed in the clinically observed patients and they can be repeated if necessary makes the increase in NLR, PLR, and MPV significant and suggests that they can be used as an auxiliary factor in the establishment of diagnosis.

**Keywords:** Acute appendicitis, N/L Ratio, P/L Ratio, MPV

## PP-0113 [Emergency Surgery and Trauma]

# Retrospective Analysis of Patients at the Age above 60 Years Who Were Performed Appendectomy

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**Objective:** Acute appendicitis (AA) is the most common cause of acute abdomen in all age groups. In the diagnosis of AA, anamnesis and physical examination findings are still more prevalent than laboratory and imaging methods. Differences can be seen in the clinical courses of patients under 5 years and over 50 years of age. In this case, it may be difficult to diagnose. In this study, it was aimed to retrospectively analyze the patients over 60 years of age, who were performed appendectomy.

**Material and Methods:** In this study, 585 patients who underwent laparoscopic and open appendectomy with the pre-diagnosis of acute appendicitis in the General Surgery Department of İzmir Katip Çelebi University Atatürk Training and Research Hospital between 01.01.2016 and 31.12.2017 were examined. Among this patient group, a total of 56 patients (10.3%) at the age of 60 years and above were included in the study. Patients' demographic characteristics, time of admission, imaging findings, Alvarado scores, histopathological reports, morbidity, and mortality were evaluated retrospectively from the PROBEL database.

**Results:** Of the patients, 33 (59%) were male and 23 (41%) were female. The mean age was  $64.03 \pm 2.1$  years. In the 68.3% of the patients, the Alvarado score was significantly higher than the score of "seven", which is defined as significant in literature. All of our patients underwent USG and CT scans of the abdomen. Eight of the patients (14.3%) were performed laparoscopic appendectomy and 48 (85.7%) underwent open appendectomy. Postoperative histopathology reports included 3 (5.5%) lymphoid hyperplasia cases, 6 (10.7%) acute appendicitis cases, 32 (57.1%) phlegmonous appendicitis cases, 7 (12.5%) gangrenous appendicitis cases, 7 (12.5%) perforated appendicitis cases, and 1 (1.8%) neuroendocrine tumor case. After the operation, 1 (1.8%) patient developed deep vein thrombosis, 3 (5.5%) patients had wound site infection, and 1 (1.8%) patient developed ileus. The patient developing ileus recovered conservatively. The mean duration of hospitalization was found to be  $2.3 \pm 0.4$  days. The patient with neuroendocrine tumor was followed up because the tumor diameter was 12 cm.

**Conclusion:** Acute appendicitis is more common in adolescents and adults, and its incidence is lower in patients younger than 5 years and older than 50 years. In the study by Menteş Ö et al., the incidence of AA was reported to be 2.37% in patients over 60 years of age. In our study, this rate was 10.3%. We think that the highness of our ratio, which was higher than the literature, was due to a few number of sampling and our being a tertiary care hospital. Difficulties also exist in diagnosing with advanced age. While Malik et al. reported a negative appendectomy rate of 32.5% in the elderly patients, this rate was 5.4% in our study. The reason for this lower rate was that the referred patients were selected. In general, the perforation rate in AA is about 16-39%, on average 20%. At an advanced age, this rate can reach 55-70%. This rate was 12.5% in our study. In the study of Menteş et al., they found morbidity rate as 10% and our morbidity rate was 7.14%. In our study, no mortality occurred. In conclusion, anamnesis, physical examination, and imaging methods are highly reliable in diagnosing acute appendicitis in patients over 60 years of age with right lower abdominal pain. Laparoscopic appendectomy can be applied safely to patients in this age group despite the fact that there is a small number of patients. However, we think that it will be useful to keep this age group under supervision because of their increased comorbid diseases.

**Keywords:** Above the age of 60 years, acute appendicitis, emergency

PP-0114 [Emergency Surgery and Trauma]

## Role of Preoperative C-Reactive Protein Value and Neutrophil Percentage in the Conversion from Laparoscopic Appendectomy to Open Appendectomy

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**Objective:** In our study, it was aimed to investigate the factors causing conversion to open appendectomy (OA) in patients undergoing laparoscopic appendectomy (LA) due to acute appendicitis. We also aimed to evaluate the effects of CRP and neutrophil percentage, which are among preoperative laboratory parameters, on the conversion and to determine a cut-off value for these parameters.

**Material and Methods:** The files of patients undergoing laparoscopic appendectomy for acute appendicitis at our center between January 2011 and January 2017 were retrospectively examined. Pre-operative American Society of Anesthesiology score, Alvarado score, white blood cell count, C-reactive protein level, and neutrophil percentage were assessed.

**Results:** LA was performed in 394 patients with the pre-diagnosis of acute appendicitis. In 17 (4.31%) patients, the conversion to OA was detected. For the CRP values of 108.5 mg/L and above and neutrophil percentage values of 81.5% and above, the conversion from LA to OA was found to be statistically significant.

**Conclusion:** It was seen that male sex, age, and high values of neutrophil percentage and CRP were risk factors for the conversion from LA to OA in patients who were performed laparoscopic appendectomy due to acute appendicitis.

**Keywords:** Laparoscopic appendectomy, C-reactive protein, neutrophil, conversion to open surgery

PP-0115 [Emergency Surgery and Trauma]

## A Case of 'Wandering Spleen' Presenting with the Clinical Picture of Acute Abdomen

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Spleen stabilization is achieved by splenophrenic, splenocolic, gastrosplenic, splenorenal, and colicophrenic ligaments. In conditions causing loosened ligament, such as developmental anomalies in these ligaments or collagen tissue diseases, the spleen can localize in any place in the intraabdominal cavity, except its usual location at the left upper quadrant, and it can even localize in the pelvis with the influence of gravity. Although this extremely rare condition is usually asymptomatic, it sometimes present with findings such as mechanical intestinal obstruction associated with an abdominal mass and compression or with the severe picture of acute abdomen associated with splenic ischemia due to splenic artery and/or vein torsion. In this study, the clinical course of a 29-year-old female patient who was admitted to our clinic with diffuse abdominal pain, had a palpable mass in the lower abdominal quadrant in the physical examination, and had a torsion of "wandering spleen" in the imaging techniques was examined. The decision of laparotomy was made and the patient was performed emergency splenectomy. She was discharged without any problems on the postoperative 4<sup>th</sup> day and no medical problem was detected in the 3<sup>rd</sup> month of follow-ups at the outpatient clinic. In the literature, the incidence of splenic torsion secondary to "wandering spleen" is around 0.2%. Although "wandering spleen", which is especially common in young women, is rarely encountered in current clinical practice, this condition should be kept in mind when general surgeons evaluate the cases of acute abdomen because it may lead to a clinical picture requiring emergency surgical approach.

**Keywords:** Acute abdomen, wandering spleen, splenic torsion, splenic ischemia, emergency surgery, splenectomy

PP-0116 [Emergency Surgery and Trauma]

## Our Case with Intraperitoneal Rupture of Hydatid Cyst: Evaluation of 12 Cases

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**Objective:** Hydatid cyst is often a parasitic infestation caused by *E. granulosus*. Hydatidosis is endemic in the Mediterranean region, including Turkey. In humans, it can be seen in the liver at the rate of 50-75%, in the lungs at the rate of 25%, and in different organs at the rate of 5%. Patients with hydatidosis are asymptomatic until complications occur. One of the most common complications is the spontaneous or traumatic intraperitoneal rupture of the cyst. Intraperitoneal perforation of the cyst can occur in a variety of forms, ranging from mild abdominal pain to anaphylaxis and sudden death. Of hepatic hydatid cysts, 1.7-8.6% are manifested by intraperitoneal perforation. Its treatment is emergency surgery.

**Material and Methods:** Twelve patients who were urgently operated due to intraperitoneal rupture in our clinic between October 2012 and October 2017 were examined retrospectively.

**Results:** In the same period, 106 patients underwent elective hydatid cyst surgery. Our perforation rate was 10.1%. The proportions of female (6) and male (6) were equal for the cases that were operated due to intraperitoneal rupture. The mean age was 39.8 (16-79) years. All patients had peritoneal irritation findings. One patient had a history of previous PAIR. Only one of the patients described a trauma story and spontaneous perforation was present in 11 patients. Ruptured cysts were seen in the right lobe in 9 patients and in the left lobe in 3 patients. The patients, except two patients with a previous diagnosis of liver hydatid cyst, were hospitalized in our hospital after admission to the emergency unit. Blood tests (whole blood count, blood group, routine biochemistry), PAAC graph, abdominal USG and computerized tomography were used for preoperative evaluation. PAAC graph and abdominal USG were used as standard in all patients. Four patients underwent computerized tomography. In USG imaging, intrabdominal free fluid was detected in all patients. CT images showed multiple cysts in the liver and abdomen and intraabdominal free fluid. In all of the 12 patients with perforated hepatic hydatid cysts, the circumference of hydatid cyst was surrounded by pads impregnated with 3% hypertonic saline solution to prevent the spread of parasite into the abdomen during the removal of the cyst. The open bile ducts on the internal surface were sutured with non-absorbable sutures. The abdominal cavity was irrigated with 3% hypertonic saline to prevent peritoneal spread. Subsequently, partial pericystectomy (pp) and drainage, pp and omentoplasty, or laparoscopic pp were performed.

**Conclusion:** Although the perforation of the hydatid cysts into the peritoneal cavity is rare, it can cause some difficulties for surgeons. This pathology should be included in the differential diagnosis of acute abdomen in endemic regions. In patients diagnosed with intraperitoneal hydatid cyst rupture, emergency medical treatment should be initiated against allergic and anaphylactic reactions and urgent surgery should be done without delay. The aim of surgical treatment is to prevent complications, to remove local disease, and to reduce the morbidity, mortality, and recurrence rates to the lowest level.

**Keywords:** Hydatid cyst, intraperitoneal rupture, emergency surgery

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## PP-0117 [Emergency Surgery and Trauma]

# Our One-Year Fecal Diversion Results in the Treatment of Perineal Necrotizing Fasciitis (Fournier's gangrene)

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**Objective:** Perineal Necrotizing Fasciitis (Fournier) is a severe and life-threatening polymicrobial infection of the perineal and perianal region. Even in today's treatment conditions, it has a high mortality and decreases quality of life. Therefore, the administration of the most aggressive treatment in the appropriate patient group at the accurate time provides a positive contribution to the course of the disease and reduction of the cost. In this study, we aimed to share the results of 8 patients treated for Fournier's gangrene (FG) at our clinic in 2017.

**Material and Methods:** The data of 8 patients admitted to our emergency service in 2017 and diagnosed with FG were retrospectively evaluated. Patients' demographic characteristics, comorbid diseases, durations of hospitalization, the application of fecal diversion, and the number of surgical debridement after fecal diversion were compared.

**Results:** Of 8 patients with the diagnosis of FG, who were admitted to our emergency service in one year, 4 (50%) were female and 4 (50%) were male. The mean age was 58.78 (42-83) years. The majority of patients (87.5%) had diabetes as a comorbid disease and the others (12.5%) had coronary artery disease and hypertension. Although the lesions had perianal localization in all patients, concurrent scrotal involvement was observed in 1 patient (12.5%). Three patients (37.5%) had skin defects larger than 75 cm<sup>2</sup> in the perianal region after the first debridement. Loop colostomy was performed as fecal diversion in 5 patients (62.5%), including these 3 patients. The average debridement number was 6.12 (1-20). In patients treated with fecal diversion, the inhibition of stool contamination was observed to have positive contribution to decreasing the number of surgical debridements. The duration of hospitalization was longer in patients undergoing fecal diversion for reducing the length of hospital stay, reducing the number of surgical debridements, and controlling polymicrobial infection than in those not undergoing it. Because these

patients had larger lesions localized close to the perianal region, which were difficult surgical injuries. Vacuum wound dressing systems were used in 4 patients (50%) to aid in surgical debridement. Vacuum dressing systems were used in only 4 (80%) of 5 patients undergoing fecal diversion. One patient died on the 54th day of hospitalization. Mortality was seen as 12.5% in this series. The other 7 patients were discharged on average 18.85 days (6-35 days).

**Conclusion:** FG is a serious polymicrobial infection with high mortality rates even with current treatment modalities. These patients usually have comorbidities, the most commonly diabetes. The cutaneous involvement is just the tip of the iceberg and surgical debridement should be enlarged until perfused live tissue is seen. In 8 FG patients who were admitted to our hospital in one year, we prevented stool contamination as soon as possible in patients requiring fecal diversion, and we concentrated on surgical debridement. There is a need for larger series of studies with more patients.

**Keywords:** Debridement, Fournier, colostomy, perineal necrotizing fasciitis

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## PP-0118 [Emergency Surgery and Trauma]

# An Unusual Cause of Ileus: Giant Metastatic Ovarian Mass

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**Introduction:** Adhesions that appear as a cause of ileus are seen in most of patients following major abdominal surgery. Most of the small bowel obstructions are due to adhesions and 80% of the adhesions are associated with previous operations. Moreover, adhesions can occur due to the masses outside the gastrointestinal system (ovarian adenocarcinoma; ovarian fibroma, endometriosis). In this study, we aimed to present a patient operated for ileus associated with giant ovarian metastasis of colon cancer.

**Case:** A 67-year-old female patient was admitted to our clinic with the complaints of nausea, vomiting, abdominal distention, excessive fatigue, and inability to defecate. Her medical history included left hemicolectomy due to colon cancer. In her physical examination, her abdomen was very tense and distended. The patient was taken into emergency surgery with the pre-diagnosis of ileus. An approximately 15 cm bilateral ovarian mass obstructing the ileum was observed in the patient. The mass was removed by performing bilateral salpingo-oophorectomy without perforation.

The patient's condition dramatically improved in the postoperative period and she was discharged on the 5th day. The result of histopathological examination was reported as metastatic adenocarcinoma.

**Conclusion:** It should be kept in mind that the adhesions developing in the evaluation of patients admitted due to ileus can also be associated with masses originating from the regions outside the gastrointestinal system. It should be noted that the patient may need to be evaluated systemically.

**Keywords:** Ileus, ovarian mass, metastasis

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## PP-0119 [Emergency Surgery and Trauma]

# The Effectiveness of QUICKSOFA and SIRS in Patients with Major Burn

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**Objective:** In burn patients, there is no risk determinant for a mortality rate that has already been agreed upon. In our study, the efficacy of the SIRS (Systemic Inflammatory Response Syndrome) and QUICKSOFA (Quick Sepsis Related Organ Failure Assessment) evaluations, which are among commonly used parameters in clinical practice, in burn patients was investigated

**Material and Methods:** Of the patients hospitalized in our clinic in 2017, 44 patients who were accepted as major considering burn percentage and depth as criteria were included in the study. In this retrospective study, 12 (27.3%) patients were found to have mortal course. The QUICKSOFA values were calculated by using Glasgow coma score, respiratory rate and systolic blood pressure data on patients' files and SIRS values were calculated by using white blood cell count, respiratory rate or PCO<sub>2</sub>, temperature, and heart rate. The patients receiving 2 out of 3 values for QUICKSOFA and those receiving 2 out of 4 values for SIRS were considered positive. The results were analyzed for significance by using the Chi-square test. The value of p < 0.05 was considered as statistically significant.

**Results:** In 12 (66.7%) of 18 patients with positive QUICKSOFA and mortality risk, mortality occurred (p < 0.001). Mortality was observed in 12 (52.2%) of 23 patients with positive SIRS (p < 0.001). For both tests, the patients with negative mortality risk did

not display a mortal course. In five patients, both tests provided the result of high risk for these patients although they did not have mortality.

**Conclusion:** In trauma patients, risk scoring for mortality is important for detecting patients who need to be paid more attention. It is especially important in the case of massive injuries. In our study, it was observed that false positive rate was lower in the patients applied QUICKSOFA than those applied SIRS. Patients who need to be referred to reference centers can be distinguished by applying QUICKSOFA in massive injuries. There is a need for further extensive multicentre studies to determine the specificity and sensitivity of these tests.

**Keywords:** Mortality, SIRS, burn, QUICKSOFA

## PP-0120 [Emergency Surgery and Trauma]

# A Rare Foreign Body in the Stomach: Case Report

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**Introduction:** Foreign body swallowing is a condition that is frequently encountered in children. Less frequently, it is seen in the adult age, chronic alcoholics, epileptic or psychiatric patients, and in those with mental retardation. It has been emphasized in the literature that 75.6% of the foreign bodies are spontaneously removed, 19.5% are removed with endoscopic method, and 4.8% are performed surgical intervention. In this case report, we aimed to emphasize the importance of remembering ingestion of foreign bodies in patients with mental retardation or psychiatric illness, who are admitted to outpatient clinics for abdominal pain.

**Case:** A 52-year-old male patient followed up by the department of psychiatry for schizophrenia was admitted to the emergency unit due to the complaints of bloody vomiting and abdominal pain. There was no abnormality in her familial history. In the evaluation of his vital signs taken in the emergency unit, blood pressure was 120/70, pulse was 80, body temperature was 37.3. The physical examination revealed tenderness in the epigastrium, but no evidence of defense and rebound in the abdomen. The intestinal sounds were normoactive and there was spontaneous gas-stool discharge. In the laboratory analysis, the value of leukocyte was 11.300 g/dl, hct was 29.74, hb was 10.19 g/dl, and MCV was 89.30, and he had mild anemia. No abnormality was detected in his biochemical values. In the direct abdominal radiography in standing position, which was performed in the emergency unit, there was an image consistent with radiopaque foreign body in the stomach and several foreign bodies were observed at the level of the small intestine and colon. During the gastroscopy, a large number of coins, metal cutlery handles, and screws were observed in the corpus. Decision of an operation was made for the patient. With gastrotomy, 95 metal foreign bodies were removed. The opened stomach was closed over double layers. On the postoperative 7th day, the patient was consulted to the psychiatry and he was discharged without any complication. In the control direct abdominal radiography in standing position, which was performed in the 2nd month, there was no foreign body in the stomach, small intestine and colon.

**Conclusion:** Foreign body swallowing is more common in children, but can be seen in adults with mental retardation and psychiatric disorders, and it should be remembered in these patients with abdominal pain. Foreign bodies do not have a unique symptom and physical examination finding. Direct radiographs can be used to obtain information about the number of radiopaque foreign bodies, their shapes, and their locations in the gastrointestinal system. Approaches in the treatment of swallowed gastrointestinal bodies are endoscopy, observation, and surgery. In the presence of peritoneal irritation findings, laparotomy should be performed when the foreign body remains in the same localization for 48-72 hours. In cases such as obstruction and perforation, surgery may be needed.

**Keywords:** Foreign body in the stomach, acute abdomen, laparotomy

## PP-0121 [Emergency Surgery and Trauma]

# Spontaneous Rupture of Splenic Artery Aneurysm in Pregnancy

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**Introduction:** The most common type of visceral artery aneurysms is splenic artery aneurysms with the rate of 66%. Although no specific cause is known, the etiologic factors found to be responsible include atherosclerosis, focal arterial inflammation,

pancreatitis, hypersplenism, portal hypertension, trauma, hormonal and hemodynamic changes due to pregnancy, liver transplantation, and splenomegaly. Spontaneous rupture of the splenic artery aneurysm (SAA) has mostly been seen in women with pregnancy and reported to have mortality of 70%. In this study, we aimed to present a 33-week pregnant patient who was admitted to the emergency unit with the complaint of undefined abdominal pain and who died due to arrest associated with hypovolemic shock in her follow-up.

**Case:** A 32-year-old, 33-week pregnant woman was admitted to the emergency obstetric polyclinic with the complaint of abdominal pain ongoing for 3 days and darkening color of urine. In the examination, emergency gynecopathology was not considered and she was directed to the emergency adult polyclinic. No abnormality was detected in the whole abdominal ultrasound. In the laboratory analysis, the value of leukocyte was 41000, hct was 29, and hb was 11. Because the patient was pregnant, abdominal tomography was not requested. In the control analysis of the patient who developed sudden hypotension while undergoing the examination and treatment in the emergency unit, the value of hct was evaluated as 15 and hb as 3.7. In the bedside ultrasonography, abdominal diffuse free fluid was detected and she was taken into laparotomy due to the pre-diagnosis of intraabdominal bleeding by the team from the departments of general surgery and gynecology and obstetrics. In the exploration, 3,000 cc of intraabdominal hemorrhagic fluid was aspirated, the uterus and adnexal structures were observed to be natural, and the liver and spleen were healthy. However, there was bleeding leaking from a 5x3 cm palpable mass adjacent to the spleen into the splenic hilus. The gastrocolic ligament was opened and the rupture of pulsatile aneurysm was observed in the 1/3 distal area of the splenic artery. After the patient was performed splenectomy and aneurysm resection, and also massive blood transfusion, she was taken into postoperative intensive care follow-up. During this period, the patient developed the picture of DIC and cardiac arrest. She did not respond to resuscitation and she died. The pathological evaluation of the specimen was reported as arterial aneurysm.

**Conclusion:** Splenic artery aneurysm can very rarely expand and rupture during pregnancy. In patients with ruptured SAA, cardiac arrest is inevitable as well as hypotension, tachycardia, and hemodynamic collapse. Clinical suspicion, early diagnosis, and preoperative resuscitation are the key elements of treatment together with early surgical intervention.

**Keywords:** Splenic artery aneurysm, pregnancy, spontaneous rupture

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## PP-0122 [Emergency Surgery and Trauma]

# A Rare Cause of Acute Abdomen: Omental Infarct: Case Report

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**Introduction:** Omental infarct is a rare cause of acute abdomen, occurring with impaired blood supply by torsion, thrombosis or vasculitis of the omental vessels, or obstruction of the omental venous return. In the literature, less than 100 cases, most of whom were adult men, have been reported. Depending on the location of the infarcted omental tissue, it may be confused with acute abdomen causes such as appendicitis, cholecystitis, diverticulitis, and peptic ulcer perforation. In this study, we present a patient operated for acute abdomen and diagnosed with omentum infarction.

**Case:** A 38-year-old male patient was admitted to the emergency unit with pain in the right upper abdominal pain ongoing for two days. In the physical examination, there was tenderness with palpation, defense, and rebound in the right upper quadrant of the abdomen. Laboratory tests revealed the value of leukocytosis as 10500/mm<sup>3</sup> and CRP as 25 and other parameters were within normal interval. No abnormality was detected in the ultrasound, but inflammation, edema, and increased thickness were observed in the omental tissue in the right upper quadrant in the whole abdominal CT and it was reported as omental infarct. Diagnostic laparoscopy was planned for the patient. The appendix and gallbladder were observed to be natural. There was erythema and edema in a 7x6 cm omental segment in the right upper quadrant and partial omentectomy was performed with ligature. The patient's postoperative abdominal findings were regressed and he was discharged on the 2nd day with full recovery. The pathology of the partial omentum material was reported as omental infarct.

**Conclusion:** According to the literature, omental infarct is 3.5 times more common in men than in women. It is usually seen in obese patients in the fourth and fifth decades. Our case was also an adult male patient, which was consistent with the literature. Clinically stable patients can be treated conservatively. Diagnostic and therapeutic laparoscopy can be used in cases where the cause of acute abdomen can not be distinguished from others. A dramatic improvement is observed with laparoscopic resection of the infarcted omental segment.

**Keywords:** Acute abdomen, omental infarct, diagnostic and therapeutic laparoscopy

## PP-0123 [Emergency Surgery and Trauma]

## Partial Cecum Necrosis Mimicking Acute Appendicitis

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**Introduction:** Isolated cecal necrosis (ICN) can be seen in posttraumatic cases and chronic hemodialysis patients, after open heart surgery, and in patients with a history of digoxin usage, as well as it can occur in association with atherosclerosis of the cecal arteries or thromboembolism. It is among the risk factors in atherosclerotic vascular diseases. In this study, we aimed to present an elderly patient with atherosclerotic coronary heart disease and hypertension and with acute abdomen findings, whose exploration revealed ICN.

**Case:** A 68-year-old male patient was admitted to the emergency unit due to abdominal pain and nausea, which started 48 hours ago and exacerbated. The patient received metoprolol 200 mg/day and acetyl salicylic acid 300 mg/day for hypertension and atherosclerotic coronary heart disease for 9 years. Physical examination revealed diffuse tenderness mostly in the lower right quadrant of the abdomen and defense and rebound in the right lower quadrant. In the laboratory analysis, the value of leukocyte was 22400/mm<sup>3</sup>, CRP was 10.1, procalcitonin was 4.6, and glucose was 150 mg/dl. Air fluid levels were found at the level of the small intestine in the direct abdominal radiography, but no abnormality was observed in the abdominal ultrasonography. The abdominal CT was reported as nonspecific sub-ileus findings. Emergency surgery decision was taken in the patient who was suspected of acute abdomen based on the physical examination findings. The abdomen was opened with subumbilical median incision. Intraabdominal serohemorrhagic free fluid was observed in the exploration. The appendix appeared normal. Necrosis was seen in a 5x6 cm field in the anterior and lateral wall of the cecum. No tumoral mass was detected. Right hemicolectomy was performed by manual end-to-side transversostomy. The patient was discharged on the 8th postoperative day without any problems. The result of pathological evaluation was reported as acute ischemic changes and transmural necrosis.

**Conclusion:** Isolated cecal necrosis is a clinical picture that is difficult to diagnose and is not common among colonic ischemic conditions. Ischemic cecal necrosis should be considered in the differential diagnosis of elderly patients presenting with right lower quadrant pain or acute abdomen picture. Right hemicolectomy and ileotransversostomy are a reliable method of treatment in patients with isolated cecal necrosis.

**Keywords:** Acute abdomen, isolated cecum necrosis

## PP-0124 [Emergency Surgery and Trauma]

## Diaphragmatic Hernias Requiring Emergency Surgery

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**Objective:** Diaphragmatic hernias can be asymptomatic, and symptomatic patients usually consult with dyspeptic complaints. Rarely, serious complications such as strangulation and obstruction, which require emergency surgery, may arise. In this study, it was aimed to examine the diaphragmatic hernias which were urgently operated in our hospital.

**Material and Methods:** The records of all patients who underwent diaphragmatic repair at İstanbul Training and Research Hospital General Surgery Department between 2005 and 2017 were reached. Their age, sex, symptoms at admission, type of hernia, surgical reports, duration of hospital stay, and postoperative complications were scanned. The cases that required emergency intervention with acute findings were examined.

**Results:** Between 2005 and 2017, 79 patients underwent diaphragmatic repair in the Department of General Surgery at our hospital. Of these patients, 19 were urgently operated due to acute symptoms and complications requiring emergency surgery due to diaphragmatic hernia. The diaphragmatic hernias requiring immediate intervention constituted 24.1% of all diaphragmatic repairs. The mean age of the patients was 54.1 years (18-93). Ten patients were male and 9 patients were female. Herni secondary to trauma was observed in 7 patients (36,8%), congenital hernia in 6 patients (31,6%) (5 patients with Morgagni and 1 patient with Bochdalek hernia), paraesophageal hernia in 6 patients (31.6%). Eight (42.1%) of the hernias requiring urgent intervention were operated due to obstructive symptoms and 6 (31.6%) were operated due to strangulation findings. There was organ perforation in 4 patients (21.1%). One patient (5.3%) was operated for severe respiratory distress associated with the herniation of the intraabdominal organs into the thorax because of post-traumatic diaphragm rupture. The mean duration of hospitalization was found to be 14.7 days. The operation of 2 patients was completed laparoscopically. The operation was started laparoscopically in

1 patient, but it was switched to conventional surgery due to adhesions. Sixteen patients underwent open surgery. In all patients who were operated due to Morgagni hernia, mesh was placed. However, primary repair and fundoplication were preferred for the patient who was operated due to Bochdalek hernia. In traumatic hernias, while primary repair was mostly preferred, mesh was used only in one patient. Half of the patients who were operated for paraesophageal hernia were found to have undergone fundoplication. Six patients were peroperatively applied tube thoracostomy and underwater drainage. Wound site disintegration in 2 patients and hemorrhage under the skin in 2 patients were observed. Because of the development of iatrogenic splenic laceration in 2 patients, splenectomy was also added to the surgery. Surgery-associated mortality was not observed in 19 patients. One patient was hospitalized due to respiratory complaints on the 13th postoperative day, treated for COPD exacerbation, but died on the postoperative 21st day due to COPD after failure to respond to treatment.

**Conclusion:** In some cases of diaphragmatic hernias, serious complications requiring immediate intervention can also develop. Clinical pictures such as life-threatening perforations are frequently encountered in complicated diaphragmatic hernias. Traumatic hernias play an important role in the etiology, and the detection and repair of the damage in acute phase is important for the prevention of chronic complications. When paraesophageal and congenital hernias are detected, they should be operated under elective conditions.

**Keywords:** Emergency surgery, diaphragmatic hernia, Morgagni, paraesophageal, strangulation

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## PP-0125 [Emergency Surgery and Trauma]

# Comparison of Appendectomy and Laparoscopic Appendectomy in Acute Appendicitis in Pregnant Women: A Single-Centered Study

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**Objective:** The aim of this study is to compare the obstetric and surgical outcomes of appendectomy and laparoscopic appendectomy in cases of pregnant acute appendicitis in a single center.

**Material and Methods:** Medical records of 44 pregnant patients who underwent urgent surgery between January 2009 and March 2017 were reviewed. One patient who was performed the Hartmann procedure due to sigmoid volvulus and three patients who underwent cholecystectomy due to acute cholecystitis were excluded from the study. Forty patients undergoing appendectomy were included in the study. SPSS v.23 was used for statistical data analysis.

**Results:** While 10 (25%) patients underwent laparoscopic appendectomy (LA group), 30 (75%) patients were performed appendectomy (group A). There was no difference in terms of demographic characteristics. The mean gestational week was lower in the laparoscopic group (group LA: 12 weeks - group A: 17 weeks, p 0.043). No statistically significant difference was found in terms of superficial or deep surgical site infection, duration of hospital stay, preterm delivery, and loss of fetus. No mortality occurred in either group.

**Conclusion:** Laparoscopic appendectomy is not currently the standard procedure in pregnant patients. However, depending on the development of laparoscopic skills and technology, it will become safer for the mother and the fetus.

**Keywords:** Pregnant, acute appendicitis, laparoscopic appendectomy

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## PP-0126 [Emergency Surgery and Trauma]

# A Rare Complication of Perianal Abscess Mimicking Acute Abdomen

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Perianal abscess is a condition that is seen more frequently in males, recurs at the rate of 10-15%, develops perianal fistula at the rate of 15-40% later, and requires to be operated. Its etiology includes foreign bodies, trauma, inflammatory bowel diseases, radiation exposure, hematological pathologies, obesity, diabetes mellitus, malignancy, and immune deficiencies. Anatomically, it is classified as perianal (40%), ischiorectal (25%), intersphincteric, and supralelevator. Clinically, it can present with pain, redness, local temperature increase, discharge, fluctuating mass, and perianal discomfort. Although its diagnosis is usually established clinically, anoscopy, MR, CT, and ERUS can be helpful. As the differential diagnosis, Bartholin's abscess, retrorectal abscess, hidrad-



enitis suppurativa, inflammatory bowel diseases, and malignancy should be eliminated. Its treatment is surgery. Our case was a 47-year-old male patient who was admitted to an external center due to anal pain ongoing for 3 days. Post-op antibiotherapy was applied to the patient who underwent drainage under local anesthesia with diagnosis of perianal abscess. On the postoperative 2nd day, he developed abdominal pain and he was referred to our clinic. He had no history of a comorbid disease and previous surgery. In the emergency unit, his complete blood analysis and routine biochemistry were analyzed. His value of WBC was 22000, CRP was 18, and other parameters were normal.

In the physical examination, there was defense, rebound, and tenderness in the right upper and lower quadrants. The abdominal CT showed an abscess pouch starting from the lateral part of the rectum and extending from the posterior of the rectus fascia to the right subcostal area. After making a decision of surgery, the patient was taken into an operation. Following adequate drainage in the perianal region, the abscess in the posterior of the right rectus was drained with one right subcostal incision and one right lower quadrant incision. The patient was applied post-operative VAC therapy and discharged on the postoperative 10th day.

**Keywords:** Perianal abscess, drainage, posterior rectus sheath abscess

## PP-0127 [Emergency Surgery and Trauma]

# The Importance of The Location of Ostomy and Experience in Gunshot Injuries: A Case Report

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**Introduction:** Gunshot injuries (GI) are the type of injuries that are still important due to the current situation of our country. Success in the treatment of gunshot injuries is directly proportional to the experience of the surgeon. In this study, we wanted to share our experience on an GI case that was referred to our clinic after the first intervention.

**Case:** A 30-year-old male patient was operated for GI in an external center. He had a bullet entry hole from the superior of the left gluteal region, but no exit hole. In the exploration, left colon injury, multiple injuries in the small bowel (7-8 injuries), left retroperitoneal injury, and non-displaced fracture in the left iliac bone were observed. The patient was performed left colon resection + end colostomy + multiple primary repairs of the small bowel + left retroperitoneal bleeding inspection operation and referred to our clinic on the second postoperative day. When the patient arrived, he had an area of hyperemia and induration extending from the left lower quadrant to the left anterior wall of the abdomen. The patient was followed for necrotizing fasciitis and the diagnosis was avoided because clinical picture of the patient was not completely defined. During the patient's follow-up, gradually elevating WBC (18000, followed by 30,000) and fever (38.8 degrees) were observed from the postoperative 7th day, relaparotomy was planned for the patient. In the relaparotomy, it was seen that primary repair had been performed on 7-8 injuries between the 50th and 70th centimeters from the Treitz ligament in the first operation and there were 2 leakages, one of which was at the repair site in the most distant area and which did not caused contamination in the abdomen. Diffuse necrosis area was detected in the retroperitoneal region, the left inguinal region, the muscles of the left abdominal wall and the subcutaneous area. After extensive debridement, it was observed that the area of the anterior abdominal wall, from which the colostomy was removed, was also affected. The patient was performed small bowel repair + colostomy transposition (anterior wall of the right abdomen) + wide retroperitoneal debridement. Then, relaparotomy was performed 4 times with intervals of 2 days. The patient, whose clinical condition and laboratory values improved, was discharged from the intensive care unit to the clinic room. The patient is still in our clinic.

**Conclusion:** We think that resection anastomosis should be preferred instead of primary repair in the multiple injuries of the small bowel, especially those involving a short segment, in gunshot wounds. In addition, if ostomy is planned to be performed in GI patients with high kinetic energy, we believe that the injured side should not be considered as the first choice.

**Keywords:** Gunshot injuries, location of ostomy, experience

## PP-0128 [Emergency Surgery and Trauma]

# Are There Parameters Preoperatively Predicting Mortality in Peptic Ulcer Perforations (PUP)?

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**Objective:** Peptic ulcer perforation (PUP) constitutes about 5% of acute abdomen cases. Ulcer perforation is the second most common complication of peptic ulcer disease, leading to significant increases in mortality in late diagnosis. In our study, it was

aimed to determine the parameters affecting mortality by evaluating preoperative clinical and laboratory values in cases operated for perforation of peptic ulcer.

**Material and Methods:** The files of 128 patients operated for peptic ulcer perforation in our hospital between January 2010 and December 2017 were reviewed retrospectively. The patients were divided into two groups as those with and without mortality. The patients were evaluated in terms of age, gender, comorbid disease, laboratory values, and duration of hospitalization. The collected data were analyzed by using SPSS (20.0 for Windows, SPSS Inc., Chicago, Illinois, USA) software. The Mann Whitney U test was used when the patients were evaluated between the groups. The p value less than 0.05 was considered to be statistically significant.

**Results:** Of the patients included in the study, 68 (53%) were male and 60 (47%) were female. The mean age of the cases was  $52.5 \pm 21.1$  years. 28 cases had comorbid diseases (DM, HT, COPD) and 4 cases had malignant disease (lymphoma, RCC, prostate Ca, bladder Tm). When the laboratory values of all patients were examined, the albumin value was  $3.53 \pm 0.78$  mg/dl, urea value was  $51.55 \pm 37.46$  mg/dl, and creatinine value was  $1.15 \pm 0.68$  mg/dl. Mortality developed in 14 (11%) of the patients. Of these cases developing mortality, 8 (57%) were male and 6 (43%) were female. The mean age was  $79.1 \pm 3.08$  years. When the preoperative biochemical parameters were examined, the albumin value was found to be  $2.59 \pm 0.2$  mg/dl, the urea value was  $98 \pm 18.14$  mg/dl, and the creatinine value was  $1.91 \pm 0.27$  mg/dl. Four cases with comorbid malignant disease died.

Of 114 cases not developing mortality, 60 (52%) were male and 54 (48%) were female. The mean age was  $47 \pm 2.5$  years. According to the analysis of preoperative biochemical values, albumin value was  $3.69 \pm 0.89$  mg/dl, creatinine value was  $1.02 \pm 0.68$  mg/dl, and urea value was  $43.55 \pm 3.43$  mg/dl. When all parameters were examined, age, albumin, urea and creatinine levels were found to be statistically significant.

**Conclusion:** In our study, advanced age, low albumin level, impaired renal functions, and accompanying comorbid conditions seem to be effective parameters on mortality and, in these cases, caution should be taken in preoperative evaluation, intraoperative circulatory stabilization and postoperative intensive care protocols.

**Keywords:** Peptic ulcer perforation, surgery, mortality

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## PP-0129 [Emergency Surgery and Trauma]

# De Garengot Hernia: A Rare Case Report

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**Introduction:** De Garengot hernia is described as an appendix in the femoral hernia sac. It is seen extremely rarely and constituted 0.5-5% of all femoral hernias. The incidence of this hernia when presented with acute appendicitis is reported to be 0.08-0.13%. In this article, a case of De Garengot hernia in a patient who was admitted to the emergency unit with pain, swelling and redness in the right inguinal region and detected to have perforated appendicitis in the femoral hernia sac was shared.

**Case:** A 43-year-old female patient was admitted to the emergency unit due to the complaints of redness, and swelling in the right inguinal region and fever, nausea and vomiting, which were going on for 3 days. She did not have any known comorbidity. Her physical examination revealed erythema, swelling and tenderness in the right femoral region and tenderness in the right lower abdomen. No intraabdominal free fluid was observed in the ultrasonographic examination. The computed tomography of the abdomen showed no intraabdominal free fluid, but there was a lesion consistent with the inflamed and edematous appendix in the femoral hernia sac and fluid consistent with abscess in the sac. There were no abnormal findings, except increased leukocytosis and CRP in laboratory values. The patient underwent emergency operation. The hernia sac was reached by femoral incision on inflamed and edematous skin, it was separated from surrounding tissues with blunt and sharp dissection and when it was opened, 50 cc purulent fluid was aspirated. It was observed that the appendix was in the sac and perforated from the apex. The femoral canal was expanded by cutting the inguinal ligament and appendectomy was performed. The hernia sac was excised and closed. The intestine was replaced into the abdomen and a mesh plug was applied to the femoral canal. A drain was placed in the lodge. During the follow-ups, dual antibiotherapy was given by considering the presence of perforated appendicitis. Patients were admitted to perforated appendicitis and double antibiotherapy was applied. She did not have fever in her follow-ups and the findings of skin cellulitis and laboratory values gradually regressed. The patient was discharged with full recovery on the 5th day and her appendix vermiformis pathology was reported as perforated appendicitis.

**Conclusion:** Although femoral hernia is usually seen on the right side, appendix vermiformis in hernia sac is a rare condition and often diagnosed during operation. In the presence of abscess, repair with graft is not recommended, but in our case, mesh plug method was applied and no complication developed. In literature, while there are publications reporting McWay's repair method with inguinal incision approach, there are also studies beginning with laparoscopic approach and leaving appendectomy and post-drainage femoral hernia repair to the second operation. For the treatment of De Garengot hernia, there is no standard approach, as it is probably very rare. In our case, the sac and appendix were reached with incision on femoral hernia,

hernioplasty was performed with mesh plug method in the same session with appendectomy drainage, and the patient was discharged with recovery. De Garengeot hernia should be kept in mind in incarcerated femoral hernias that are encountered in the emergency units and appendectomy and hernia repair should be performed in the same session.

**Keywords:** De Garengeot hernia, perforated appendicitis, femoral hernia

## PP-0130 [Emergency Surgery and Trauma]

# Diagnostic Value of the “Appendicitis Inflammatory Response” Scoring System in the Diagnosis of Acute Appendicitis

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**Objective:** In this study, it was aimed to reveal the diagnostic value of the recently proposed “Appendicitis Inflammatory Response” (AIR) scoring system for the diagnosis of acute appendicitis (AA) and to investigate whether it had an effect on the negative laparotomy rate in patients with abdominal pain, who were operated for the pre-diagnosis of AA.

**Material and Methods:** Our cases consisted of patients over 16 years old, who were admitted to the emergency unit of our hospital and diagnosed with acute abdomen and AA between 01.09.2016 and 30.06.2017. Ethical committee approval for the study was obtained. The number of patients with postoperative diagnosis of AA was 153 and the number of those not having diagnosis of AA was 140. The study included patients who were pre-diagnosed with acute abdomen and AA by the emergency service physicians and consulted to the general surgery department, and whose hospitalization and operations for the pre-diagnosis of AA were planned by general surgeons. Before operation, the patients were informed about the study and their informed consents were obtained. The patient evaluation form was filled out, and the postoperative pathology results of the patients were recorded. The patients were asked about whether they had vomiting and pain in the right lower quadrant before the surgery. In physical examination, the presence of rebound, tenderness, and defense in the lower right quadrant of the abdomen was classified as mild, moderate, and severe, and these data were recorded. In addition, the values of body temperature, hemogram and CRP were recorded. All these values were scored by the scoring system.

**Results:** There was no statistically significant difference between between AA and non-AA groups in terms of age and gender distributions. While the mean AIR score was  $5.32 \pm 1.22$  in the non-AA group, it was  $8.60 \pm 2.27$  in the AA grup and this difference was statistically significant. In the ROC analysis, the most suitable cut-off value for AIR was determined as 7,5. For this value, the sensitivity was calculated as 71.9%, selectivity as 97.1%, positive predictive value as 96.5%, negative predictive value as 76%, and general (total) accuracy rate as 84%.

**Conclusion:** While the percentage of acute appendicitis detection is high in patients with an AIR score of  $\geq 7.5$ , it would be more appropriate to decide laparotomy considering clinical and radiological findings for cases with an AIR score under 7.5.

**Keywords:** Acute appendicitis, acute abdomen, emergency surgery, appendicitis inflammatory response, scoring systems

## PP-0131 [Emergency Surgery and Trauma]

# Efficacy of Angio-Embolization in Upper Gastrointestinal System Bleeding

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**Objective:** Upper gastrointestinal system (GIS) bleeding is one of the most serious causes of mortality and morbidity. In these patients, endoscopic procedures are the first treatment method to be used in the determination and treatment of bleeding localization. However, these interventions are not successful in 5-10% of the patients and surgical or angiographic intervention may be required. In this study, we aimed to evaluate the effectiveness of angio-embolization in patients who were admitted for upper GIS bleeding to the İstanbul University Faculty of Medicine, Outpatient clinic of Trauma and Emergency Surgery and who had unsuccessful or inadequate endoscopic procedure.

**Material and Methods:** From the files of 5 patients that were included in the study, the ages, sex, values of hemoglobin (Hb), hematocrit (Hct), and vital signs at admission, minimum Hb/Hct values before the procedure, need for transfusion, endoscopic

findings, and post-procedure vital signs and Hb/Hct values were examined. The data were analysed by using the IBM SPSS Statistics 23 software. The Mann Whitney U test was used to compare the variables.

**Results:** Four of the 5 patients (80%) were male and 1 (20%) was female. Their median age was 56 (32-57) years. The median Hb value was 7.4 (6-8) g/dl before angiography and 9.7 (9.3-10-3) g/dl after angiography. When we examined the causes of bleeding, 4 patients (80%) had duodenal hemorrhage and one patient (20%) had stomach corpus hemorrhage. Three of the duodenal hemorrhages (75%) were evaluated as Forrest 1b and 1 (25%) as Forrest 2c. Prophylactic gastroduodenal artery embolization was performed in 2 (40%) patients, therapeutic gastroduodenal artery embolization in 1 (20%) patient, prophylactic left gastric artery selective embolization in 1 (20%) patient, and therapeutic inferior pancreaticoduodenal artery embolization due to pseudoaneurysm in 1 (20%) patient. Before the procedure, the median transfusion dose was 5 U (4-6) erythrocyte suspension (ES) and 3 U (2-4) fresh frozen plasma (FFP). Median transfusion requirement after procedure was 2 U (0-2) ES and 1 U (0-1) FFP. The decrease in transfusion requirement after angiography was statistically significant ( $p: 0.008$ ). All of the patients were discharged without complications.

**Conclusion:** Medical treatment and endoscopic interventions are still in the first place in upper GIS bleedings. In bleedings that are unstoppable despite the endoscopic intervention, angio-embolization is a method that can be successfully performed in technically sufficient and experienced centers because it is a minimally invasive method.

**Keywords** Upper GIS bleeding, angio-embolization, minimal invasive

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## PP-0132 [Emergency Surgery and Trauma]

# Foreign Body Ingestion Causing Retroperitoneal Abscess

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**Introduction:** The ingestion of a foreign body can be seen in adulthood, although it is more common in childhood. It can often be removed by defecation without causing damage to the gastrointestinal system, but it can rarely lead to complications. These complications include obstruction, perforation, hemorrhage, and abscess. Examples of swallowed objects include needles, toothpicks, bones, and fish bones. Follow-up and treatment vary according to the general condition of the patient, the nature of the ingested foreign body, and the location of the swallowed foreign body in the gastrointestinal system. While foreign bodies in the upper and lower gastrointestinal system can be removed by endoscopy and colonoscopy, foreign bodies passing through the small intestine are monitored with serial radiographs according to the characteristics of the objects and they may cause an indication for operation if necessary. Pointed objects may lead to perforation and rarely extra luminal migrations. The most commonly reported intestinal sites of toothpick-related perforation are the sigmoid colon, duodenum, and stomach. In this case, the case of retroperitoneal abscess caused by the extra luminal migration of a swallowed toothpick was presented.

**Case:** A 67-year-old male patient was admitted to the emergency room with a 4-day abdominal pain. He had nausea, but no vomiting. He was able to defecate. He had no comorbid disease. He also had rebound tenderness in the left lower quadrant in the physical examination, but no pathology was found in the direct abdominal graph in standing position. In the contrast enhanced tomography of the abdomen, a 64x47 mm transaxial, thick-walled, multiloculated fluid collection extending towards the middle part of the abdomen was observed in the left iliac fossa and apparent turbidity in the fat tissue surrounding the collection drew attention (abscess?). Within this defined collection, hyperdense density with linear extension was observed (foreign body?). In the laboratory analysis, leukocyte count was 11,700/mm<sup>3</sup> and C reactive protein was 275 mg/L, and surgery was planned for the patient. The abdomen was opened with median incision. At the exploration, a foreign body was detected in the meso of the sigmoid colon and there was an abscess in the retroperitoneal region. A toothpick was removed from the meso of the sigmoid colon. The retroperitoneal abscess was drained. The patient tolerated oral intake and was able to defecate in the postoperative period. He was discharged with full recovery.

**Conclusion:** Foreign body ingestion is more common in the pediatric population. The ingestion of a foreign body in adulthood can be accidental or it can also be suicidal. Although the swallowed objects usually leave the gastrointestinal system without any problems, perforation has been reported in 1% cases and extra lumen migration is below this rate. In the literature, the location of intraabdominal migration has been reported to be the spleen and pancreas, but mostly the liver. No case of retroperitoneal abscess has been found. In this article, it was aimed to draw attention to a very rare complication and to emphasize that attention should be paid in following the swallowed foreign body.

**Keywords:** Retroperitoneum, abscess, foreign body

## PP-0133 [Emergency Surgery and Trauma]

## Laparoscopic Repair with Mesh in Delayed Traumatic Diaphragmatic Hernia

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**Introduction:** Traumatic diaphragmatic hernias are infrequent, but life threatening conditions. Despite the fact that computerized tomography (CT) is a commonly used imaging technique in traumatic cases, it is possible to find cases that are not diagnosed. And for years, they can remain symptom-free. Respiratory distress due to decrease in intrathoracic volume and abdominal pain can be observed in traumatic diaphragmatic hernias. In this study, our laparoscopic approach to a case of diaphragmatic hernia with late diagnosis was presented.

**Case:** A 34-year-old male patient was admitted to the emergency room with the complaints of left shoulder pain and left chest pain. In the evaluation, the left sinus was observed to be closed in the direct radiography and he was directed to the department of chest diseases. The patient, who was requested to undergo thoracic computed tomography (CT) by the department of chest diseases, consulted to the outpatient clinic of general surgery with the results. In the patient's examination, there was an incision scar on the left axillary line at the distance of 7th rib, and it was learned that he had a history of penetrating stab wound 9 years ago. Minimal tenderness was noted in the upper left quadrant in the abdominal examination. No signs of intestinal peristalsis were detected during thoracic auscultation. In the direct radiography, the left diaphragm was elevated. In the thorax CT of the patient, the abdominal mesenteric fat tissue was observed to be herniated into the thorax from an approximately 16-cm defect in the left diaphragm in the lateral part of the superior part of the spleen. It occupied an apparent volume within the thorax. Surgical decision was made and the laparoscopic method was preferred for this patient. Under general anesthesia, a 10 mm trocar was inserted under the umbilicus and a 30-degree camera was placed. Thereafter, a 10 mm trocar from the upper right quadrant and two 5 mm trocars from the upper left quadrant and the epigastric region were also placed into the abdomen. A 4 cm defect was observed in the diaphragm, in the superior part of the spleen. It was seen that the omentum was herniated from the defect into the thorax. The adhesions were separated and the herniated part was taken into the abdomen. No ischemia was observed in the omentum. After the peroperative insertion of thoracic tube by a thoracic surgeon, the defect was repaired with prolene. Then, the dual mesh was fixed to close the defect. Operation was terminated after bleeding control. The patient was discharged on the fifth postoperative day with recovery.

**Conclusion:** Diaphragmatic rupture develops in 0.8-5% of the thoracic-abdominal traumas and approximately 30% of these cases are detected in the late period. Left diaphragmatic ruptures are more common than the right ones due to the protective effect of the liver. The stomach, colon and liver are the organs that are often herniated. In penetrating traumas, the risk is higher than in blunt traumas. Because the defect is small, the possibility of ischemia and herniation is greater and the risk of mortality increases with it. Treatment way for traumatic diaphragmatic rupture is surgery. Laparoscopic, transthoracic, transabdominal and thoracoscopic approaches are available. Laparoscopic surgery is preferred in recent years in terms of the duration of hospital stay, rapid wound healing, and postoperative pain.

**Keywords:** Diaphragmatic hernia, laparoscopy, laparoscopic hernia repair, trauma

## PP-0134 [Emergency Surgery and Trauma]

## Patient Nonresponsive to Blood Transfusion: Progression of Femoral Catheter to the Intraabdominal Cavity-Case Report

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A 34-year-old male patient admitted to the emergency service after an in-car traffic accident was expected to undergo fluid and blood resuscitation due to his hypotensive course in the follow-ups. Femoral catheters were inserted for replacement to the patient whose peripheral vascular access could not be established and blood transfusion was started. He gave no response to the transfusion. He was performed CT and it revealed splenic rupture and the patient was taken into operation. Approximately 4000 cc of bloody fluid was evacuated from the abdomen in the exploration of the patient. After splenectomy, intra-abdominal cavity was examined and it was seen that the femoral catheter advanced to the intraabdominal distance. When the CT was re-examined after the operation, it was seen that the intraabdominal localization of the catheter could be detected. We believe that complication developing in the case is important with regard to that it reminds the vital importance of controlling the location of catheter in cases having femoral catheter and being nonresponsive to the treatment.

**Keywords:** Femoral catheter, blood transfusion, catheter complication,

## PP-0135 [Emergency Surgery and Trauma]

# The Relationship between Changes in the Diagnosis and Age in the Clinic of Acute Abdomen

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**Objective:** Diseases confronted with the picture of acute abdomen are directly related to age and gender. While gynecologic pathologies are more prevalent in women, vascular pathologies and ileus are more common in geriatric patients. In our study, we aimed to examine the differences and variations of the pathologies in geriatric and non-geriatric patient groups in urgently operated patients due to the diagnosis of acute abdomen in our clinic and to provide the acceleration of interventions for early diagnosis and treatment by considering different pre-diagnoses in different age groups when acute abdomen picture was encountered.

**Material and Methods:** The file records of 375 patients who were urgently operated with the diagnosis of acute abdomen in our clinic between June 2012 and December 2017 were retrospectively evaluated. The patients' ages, sexes, and intraoperative findings were recorded. The patients at the age of 65 and above were evaluated as geriatric (GP) and the patients younger than 65 years old were evaluated as non-geriatric (NGP).

**Results:** The median age of the patients in our study was 39 (18-86) years and the male/ratio was 3.2. While the most common pathologies were acute appendicitis (AA) (53.0%), mesenteric ischemia (25.0%), ileus (36.4%), and peptic ulcer perforation (PUP) (13.6%) in geriatric patients, they were AA (71,9%), PUP (8.9%), ileus (10.9%), and colon perforation (3.8%) in non-geriatric patients. There was a significant difference between the groups (p: 0.002).

**Conclusion:** With the prolongation of lifetime on earth, the mean age of operated patients is also increasing due to the increase in the number of aging people. While especially vascular pathologies-related ischemic bowel diseases and ileus diseases draw attention in the GP group, AA is more frequently detected in the NGP group.

**Keywords:** Acute abdomen, geriatric patient, non-geriatric patient

## PP-0136 [Emergency Surgery and Trauma]

# A Rare Case Causing Acute Abdomen: Primary Chylous Peritonitis

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**Introduction:** Chylous ascites is the free accumulation of lymphatic fluid in the abdomen. As a result of damage to the lymphatic system, acid is seen in the milk consistency, which is a high triglyceride content. It is usually a chronic condition and is mostly asymptomatic. However, sudden extravasation of the lymphatic fluid can rarely lead to acute abdominal pain accompanied by peritonitis findings. In this case report, we presented a case of primary chylous peritonitis presenting with the picture of acute abdomen.

**Case:** A 19-year-old male patient was admitted to the emergency unit with sudden onset of abdominal pain. The physical examination revealed tenderness in all quadrants, defense rigidity, and rebound sensitivity. In the laboratory analysis, complete blood count and biochemical parameters were within normal intervals. Abdominal tomography revealed no pathology except the intraabdominal free fluid. The patient was scheduled for diagnostic laparoscopy. Laparoscopic exploration revealed widespread chylous fluid in the abdomen. Moreover, there was also a chylous accumulation in the ileum meso. Transverse colon and intestinal loops were dilated. The sample was taken from the pelvic fluid and aspirated. Surgical decision was made to evaluate the lymphatic system and retroperitoneum. Supra-subumbilical median incision was performed. The entire gastrointestinal system was screened for perforation. The retroperitoneum was evaluated in terms of lymphatic system. Biopsies were obtained from the omentum and peritoneum. A drain was placed into the pelvis and the operation was terminated. Malignancy, cirrhosis, tuberculosis, inflammation (radiation, pancreatitis, retroperitoneal fibrosis, etc.), postoperative traumatic causes were verified postoperatively and no pathology was found.

**Conclusion:** The incidence of chylous peritonitis is between 1/20,000 and 1/187,000 in the literature. It is rarely associated with the trauma of the lymphatic system, but may also be seen idiopathically. A widespread evaluation is not usually possible because it is a rare cause of acute abdomen. In cases of primary chylous peritonitis without any pathology, abdominal lavage and drainage are curative.

**Keywords:** Acute abdomen, abdominal pain, primary chylous peritonitis

## PP-0137 [Emergency Surgery and Trauma]

## Approach to a Patient with a History of Corrosive Substance Ingestion

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**Introduction:** The ingestion of corrosive substances is a medical emergency that is accompanied by high morbidity and mortality due to its high rates of sequelae. Its mortality rates are reported as high as 20%. The outcomes of the injury depend on the severity of the lesions, the general condition of the patient, and the speed of medical treatment. Rapid diagnosis and treatment is the most important factor in reducing mortality and obtaining optimal long-term results in the case of corrosive ingestion. Here, we aimed to present a patient who was admitted to our department due to the ingestion of a corrosive substance.

**Case:** A 32-year-old female patient was admitted to the emergency unit due to the complaint of abdominal pain that started two hours ago in association with the history of descaling agent ingestion approximately fifteen hours ago. Her blood pressure was 128/74 mm/Hg, pulse rate was 74/min, body temperature was 36.8 °C, and respiration rate was 15/min. His physical examination revealed tenderness in the epigastric region in the abdomen. There was no rebound and defense. At the time of admission, WBC was 8300 10<sup>3</sup>/μL, Hg was 12.8g/dL, Glu was 123 mg/dL, Cre was 0.7 mg/dL, Na was 135 mmol/L, K was 3.6 mmol/L, and other laboratory values were normal. In the contrast-enhanced abdominal tomography, there was impaired blood supply in the stomach wall and no other pathology was observed in the abdomen. Emergency endoscopy was required for the patient; however, the patient and her relatives did not accept the procedure. As a result, the patient was followed up in the intensive care unit in this condition. The patient, who developed the picture of acute abdomen in the follow-ups, was performed direct abdominal radiography in standing position and free air was observed under the diaphragm. Emergency laparotomy was performed. There was about 300 cc fluid associated with perforation. Necrotic and perforated areas were observed in stomach fundus and antrum. The abdomen was cleaned and total gastrectomy and nutritional jejunostomy were opened. The esophagus was removed from the thorax as a stoma. On the postoperative seventh day, the patient's feeding protocol was adjusted and she was discharged. Four months after the procedure, the patient was re-hospitalized, the colon transposition was performed, and she was discharged with recovery. The patient, who developed esophageal stricture in her anastomosis line, was once performed dilatation.

**Conclusion:** The management of corrosive substance injuries begins with an assessment of the patient's hemodynamic stability and airway adequacy. The principle of the first laparotomy is damage control, in other words, stopping the bleeding and contamination. In general, this includes total gastrectomy and feeding jejunostomy. The option of immediate restoration of the GI tract with esophagojejunostomy should only be used for stable patients with minimal intraperitoneal contamination. The restoration of the gastrointestinal system should be done when the patient is free of the systemic effects of corrosive substance injury. The most important long-term complication of corrosive substance ingestion is esophageal stricture, which is reported to be as high as 100% in transmural lesions. In addition, the risk of esophageal cancer extending to 40 or 50 years after exposure increases. For this reason, careful follow-up and routine screening are important for esophageal cancer, the protection of the quality of life, and the prevention of long-term complications following caustic esophagogastric injuries.

**Keywords:** Corrosive substance, stricture, esophagus

## PP-0138 [Emergency Surgery and Trauma]

## Vernix Caseosa Peritonitis in a Patient Undergoing Diagnostic Laparoscopy for Postpartum Acute Abdomen; Video Presentation

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**Objective:** Vernix caseosa peritonitis is a rare cause of postpartum acute abdomen. Its definite diagnosis and treatment are done by explorative laparotomy or laparoscopy because the diagnosis is difficult before the operation. In this video presentation, we aimed to present a case of vernix caseosa peritonitis diagnosed by diagnostic laparoscopy and its treatment management in a 20-year-old female patient who had a history of a cesarean section birth 10 days ago.

**Material and Methods:** The operation was initiated by placing two 10 mm trocars in the subumbilical region and left paramedian line and a 5 mm trocar from the midline in the suprapubic region. In the exploration, adhesions observed in the localization of the pfannenstiel incision in the posterior wall of the abdomen were separated from the surrounding tissue by sharp and blunt dissection. In the posterior wall of the wall, vernix caseosa and omental tissue and appendix that were adhered to the vernix caseosa were detected. Because of the presence of inflammation in the periappendicular tissues and appendiceal mesothelium, appendectomy was performed and vernix caseosa and appendix specimen were taken out. Subsequently, peritoneal lavage was performed and a drain was placed in the operation lodge, and the operation was terminated. The patient was administered antibiotherapy with ceftriaxone + metronidazole in the clinical follow-up and discharged on the third postoperative day.

**Conclusion:** Vernix caseosa peritonitis is a condition that should be kept in mind in the etiology of postpartum acute abdomen and it is difficult to diagnose it preoperatively. We believe that diagnostic laparoscopy can be performed effectively and reliably in order to confirm diagnosis and avoid inaccurate surgeries.

**Keywords:** Postpartum, acute abdomen, diagnostic laparoscopy, vernix caseosa, peritonitis

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## PP-0139 [Emergency Surgery and Trauma]

### Early Diagnosed Jejunal Volvulus

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**Introduction:** Volvulus is a special form of mechanical intestinal obstruction. It occurs when the intestinal loop is abnormally twisted around its own mesenteric axis. Its clinical picture looks like an acute abdomen. The cause of the onset of the symptoms may be due to narrowing of the intestinal segment or impairment of perfusion of the vascular structure that feeds the relevant segment. The delay in the diagnosis of volvulus results in irreversible results due to the deterioration in the feeding of the obstructed segment. Colonic volvulus is more common in adults. Small bowel volvulus (SBV) is relatively rare. It is classified as primer and secondary according to the causes. There are predisposing factors that can be congenital or acquired in secondary cases. Among them, anatomic malformation, malrotation or midgut nonrotation, fibrous band, and postoperative adhesions can be observed. In this study, we present a case of early diagnosed jejunal volvulus in an adult male patient.

**Case:** A 68-year-old male patient was admitted to the emergency unit due to abdominal pain. His pain had started in the epigastric region 24 hours ago. He defined a continuous and increasing pain. It was learned from his anamnesis that he had been operated for peptic ulcer 15 years ago. The physical examination revealed a midline incision scar of the previous operation. There were peritoneal irritation findings, more apparently in the epigastric region. The patient, whose vital signs were stable, had no pathology in the laboratory values, except for leukocytosis (12400/mm<sup>3</sup>). The direct abdominal radiography in standing position showed a large number of small intestinal air fluid levels in the upper and middle quadrants of the abdomen. The patient underwent emergency surgery with the pre-diagnosis of middle intestinal volvulus because the abdominal contrast-enhanced computed tomography revealed intestinal loops twisting around vascular structures on the mesenteric fat plane at the level of the duodenojejunal junction and severe dilatation in the duodenum at the proximal area of this level. In the operation, it was observed that the small intestinal loops passed through the window under the previous distal gastrectomy and antecolic gastrojejunostomy anastomosis and they twisted around themselves and their feeding was deteriorated. Jejunal loops were detorsioned and their feeding was improved again. The space under the anastomosis of gastrojejunostomy was closed by detecting the jejunum meso. On the fifth day of hospitalization, the patient was discharged without any problems.

**Conclusion:** Small bowel volvulus is usually seen in newborns and children. It is extremely rare in adults and frequently occurs in the jejunum. Most of the cases have preliminary causes such as diverticulum, stromal tumor, and previous operation-related bands. Our patient had a history of a previous operation. In some cases, a torsion sign (whirlpool sign) can be seen on direct radiographs. In the literature, it is reported that abdominal computed tomography is diagnostic at the rate of 83%. In our case, early diagnosis could be established through the contrast-enhanced abdominal CT. Laparoscopy can be used for both diagnostic and therapeutic purposes in cases with unclear diagnosis (5). In patients with good intestinal feeding, it is reported that the recurrence is 3,9% and only detorsion can be performed. It should be remembered that early diagnosis and treatment are the most important factors for reducing mortality.

**Keywords:** Early diagnosis, volvulus

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## PP-0140 [Emergency Surgery and Trauma]

### Marginal Ulcer Perforations: 5 cases

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**Objective:** Marginal ulcer perforation (MUP) is a complication of gastroenteric reconstruction and is often described as the perforation at the edges of the gastroenterostomy anastomosis, typically perforation of the ulcer on the jejunal side. In this article, we aimed to present the cases that were urgently operated due to the MUP and to draw attention to the issue again.

**Material and Methods:** The files of 5 patients who were operated due to marginal ulcer perforation in İzmir Katip Çelebi University Atatürk Training and Research Hospital, General Surgery Clinic between June 2006 and June 2017 were examined retrospectively. Patients' demographic features, surgical data, and surgical complications were recorded based on patient files and hospital database information.

**Results:** The mean age was calculated as  $58 \pm 7.9$  (52-71) years. Of the patients, one (20%) was female and 4 (80%) were male. Four of the patients (80%) had a history of previous ulcer surgery and the other patient had a operation history due to stomach cancer. In all patients during surgery, the first operation was found to be the Billroth-2 procedure. The perforation area was found (20%) in the jejunojejunostomy line in 1 patient and in the gastroenterostomy line in the other 4 (80%) patients. The surgical procedure was anastomosis revision in 2 patients (40%), distal gastrectomy + re-anastomosis in 2 (40%), and primary suture in 1 (20%) patient. The mean length of hospital stay was calculated as  $9 \pm 4$  days (7-16). Postoperatively, one patient (20%) had a low-output biliary fistula and it spontaneously ended within 10 days. No perioperative mortality was observed in any patient.

**Conclusion:** Despite the recent decline in peptic ulcer surgery, the MUP rarely arises. The possibility of marginal ulcer perforation should be considered in patients with a history of stomach surgery for a malignant or benign cause, who have acute abdomen findings or intraabdominal free air. Surgical approach may be anastomotic revision or primary repair, but the surgeon should determine the ideal method considering the intraoperative findings.

**Keywords:** Anastomosis ulcer, gastroenterostomy, jejunojejunostomy, marginal ulcer, perforation

## PP-0141 [Emergency Surgery and Trauma]

### A Rare Case: Paraduodenal Hernia

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**Introduction:** Internal herniation is one of the uncommon causes of small bowel obstruction. Paraduodenal hernias are the most common type of internal abdominal hernias and constitute about 50% of the cases. The left paraduodenal hernia is 3 times more common than the right paraduodenal hernia. Its diagnosis can be made by abdominal imaging performed during the symptomatic period, rarely in the preoperative period. In this study, it was aimed to examine a case presenting with acute abdominal symptoms associated with right paraduodenal hernia.

**Case:** A 33-year-old male patient was admitted to the emergency room with the complaints of abdominal pain, nausea and vomiting. The patient's history included the complaints of abdominal pain and nausea that started five days ago and vomiting for the last two days. The palpation of the abdomen revealed tenderness, defense and rebound in all quadrants. His intestinal sounds could not be heard. He was unable to defecate approximately for 3 days and his leukocyte count was measured as 16000/mm<sup>3</sup>. Other biochemical values were within normal intervals. It was learned from his anamnesis that he had abdominal pain attacks that started especially after the meals. The oral iv contrast-enhanced abdominal CT revealed dilated small intestine segments and the small intestines twisted around the meso. The patient was taken into operation with the pre-diagnosis of internal herniation. During surgery, it was observed that almost the whole small intestine formed a capsular hernia sac and the proximal portion of the jejunum entered into a defect in the duodeno-jejunal junction. The small intestine segments in the defect were removed and the defect in the peritoneum was repaired. Since no complication developed and his complaints disappeared in the postoperative follow-up, the patient was discharged.

**Conclusion:** It should not be forgotten that paraduodenal hernias may cause internal herniation and obstruction in cases with no history of a previous operation and no findings explaining the pathology in the examinations.

**Keywords:** Hernia, acute abdomen, paraduodenal hernia

## PP-0142 [Surgical Site Infection, Surgical Intensive Care]

### Mortality Profile in General Surgery Intensive Care Unit

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**Objective:** The purpose of this study is to investigate the pathologic causes of hospitalization indication, demographic data, possible causes of developing mortality, and factors affecting mortality in patients that died in the general surgery intensive care unit and to determine patient profiles with high risk of mortality.

**Material and Methods:** This study was performed to examine patients over 18 years, who were hospitalized in the general surgery intensive care unit of Kahramanmaraş Sütçü İmam University between April 2014 and December 2017. Their data were retrospectively reviewed by scanning patient registry in the intensive care unit, Enlil HBYS patient registry system, and patients' model files. Patients who were hospitalized with neurosurgical or internal branch indications, and those transferred to other intensive care units for the continuance of their follow-ups and treatments were excluded from the study and other remaining patients were included in the study. Demographic data including the age and gender of the patients, number of admitted patients, the distribution of comorbid diseases according to the systems, emergency or elective way of the first admission, urgent or elective distinction of operations of the patients, malignant/benign distinction of pathological indications for surgery, distinction of traumatic/nontraumatic etiologic factors, the application of mechanical ventilation, the duration of mechanical ventilation shorter or longer than 24 hours, separation of patients into two groups as those who were operated and those who were followed-up without operation, the presence of peritonitis, and the time passed from the first admission to mortality in day were evaluated.

Quantitative data were expressed as mean + standard deviation and median range (min.-max) and qualitative data were expressed as n (%).

**Results:** Between April 2014 and December 2017, a total of 1944 patients were hospitalized in intensive care unit. A total of 739 patients were excluded from the study. Of the 1205 patients included in the study, 63 developed mortality and the mortality rate was found to be 5.22%. Twenty-two (34.9%) of the 63 patients were urgently operated and 9 (12.3%) were electively operated, and the remaining 32 (50.8%) patients were followed nonoperatively. Eight of the patients underwent mechanical ventilation for a time shorter than 24 hours and 35 patients underwent it for longer than 24 hours. Thirty-two patients had comorbid disease and 31 patients did not have serious chronic disease. The mean duration of hospitalization was 12.9 (min 1-max 224) days. 18 of the patients had the picture of peritonitis.

**Conclusion:** In this study, emergency surgeries, postoperative mechanical ventilation dependency and prolonged duration of ventilation in the operated patients, other accompanying morbid diseases, and the presence of peritonitis in patients were found to be the factors affecting mortality.

**Keywords:** Surgical intensive care, mortality, profile

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## PP-0143 [Surgical Site Infection, Surgical Intensive Care]

# Predictive Factors for the Development of Surgical Site Infection After Colorectal Cancer Surgery

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**Objective:** In this study, we wanted to reveal the predisposing factors and cut-off values for the development of surgical site infection in patients who were operated due to colorectal cancer.

**Material and Methods:** The data of 86 patients who were urgently or electively operated due to colorectal cancer in the Department of General Surgery at our hospital between 2015 and 2017 were retrospectively evaluated. It was aimed to investigate whether patients' ages, genders, body mass index, ASA score, the presence of chronic pulmonary disease, Hct levels, albumin level, duration of operation, localization of the disease (colon or rectum), the presence or absence of ileostomy or colostomy in operation, the presence of hyperglycemia and surgical volume affected the development of superficial or deep surgical site infection.

**Results:** All parameters except sex and body mass index were found to be significant in the occurrence of surgical site infection. The cut-off values were 63,5 years for age, 167.5 minutes for the length of operation, 3.05 for the value of albumin, and 33,15 for the value of HCT.

**Conclusion:** We think that the probability of developing postoperative surgical site infection is higher in patients older than 63,5 years, who had surgery longer than 167.5 minutes, preoperative albumin value of 3.05 and Hct value of less than 33.15. If patients that are to be operated for colorectal cancer are diabetic and in ASA 3 risk group, are performed ileostomy or colostomy during surgery, have chronic pulmonary disease, have cancer localized in the rectum, and have disease at stage 3 according to the postoperative classification, they should be evaluated with above-mentioned cut-off values and it should be kept in mind that the possibility of superficial or deep surgical site infection development is high in these patients. And also, symptoms and findings associated with the infection should be well-evaluated.

**Keywords:** Colorectal cancer, surgical site infection, predictive value

## PP-0144 [Surgical Site Infection, Surgical Intensive Care]

## A Method Decreasing Postoperative Ileus, Postoperative Pain and Intensive Care Need; Local Bupivacaine Infusion

Erol Kiliç

*Department of General Surgery, Mustafa Kemal University School of Medicine, Hatay, Turkey***Introduction:** Postoperative pain treatment is important because of its positive effects on tissue healing.**Objective:** The purpose of this study was to evaluate the effect of local bupivacaine administration on postoperative pain, ileus and the duration of stay in the intensive care unit.**Material and Methods:** The patients followed up in the intensive care unit after median laparotomy and applied conventional analgesia and local bupivacaine-assisted conventional analgesia between 2016 and 2018 were retrospectively analyzed in terms of postoperative pain, ileus, and duration of hospitalization in the intensive care unit. The patients were divided into two groups as those administered 5ml/h/48h bupivacaine on the fascia in addition to postoperative conventional analgesia (nSAII + opioid)/ Group 1) and those applied conventional analgesia (Group 2). The groups were retrospectively evaluated in terms of preoperative age, gender, ASA score, surgical protocols and surgical durations, postoperative pain scores (VAS), postoperative ileus (POI), bowel sounds, and flatus/defecation time (hours). The data were analyzed by using the SPSS 21 software. The value of  $p < 0.05$  was accepted to be statistically significant.**Results:** Patients' age, sex, preoperative ASA score, surgical protocols and durations were similar. Postoperative 8-24h/24-48h period VAS value, ICU duration and flatus/defecation time of group 1 were significantly lower ( $p < 0,05$ ).**Conclusion:** Postoperative ileus (POI) is a frequent complication that is defined as delayed defecation accompanied by hypokinetic bowel sounds that last for 3-5 days postoperatively [1,2]. In the case of POI development, nausea-vomiting, pain and abdominal distention develop, leading to delayed healing in patients undergoing major gastrointestinal surgery [2]. After abdominal surgery, POI develops in two phases as neurogenic and inflammatory and inflammatory phase clinically comes to the forefront [3]. POI can be prevented by reducing/preventing inflammation. Preventing/reducing inflammation with postoperative analgesia is very important in the prevention of POI [1,3]. Local anesthetic drugs have antiinflammatory effects in addition to analgesic effects [4,5]. It has been thought that bupivacaine reduces inflammatory cytokines and contribute to the tissue healing, thereby prevents the development of POI. Bupivacaine has been shown to positively contribute to the recovery of anastomosis even in peritonitis [6] and significantly reduce proinflammatory cytokines such as TNF- $\alpha$ , IL-1 $\beta$  and IL-6, leading to an anti-inflammatory effect [5]. In addition to reducing early postoperative pain, bupivacaine infusion on the fascia is an effective method because of the inhibition of POI and its contribution to less intensive care need due to these effects.**Keywords:** Bupivacaine infusion, abdominal surgery, postoperative ileus

## PP-0145 [Surgical Site Infection, Surgical Intensive Care]

## Investigation of Antibiotic Activity of New Generation Polyurethane Material Containing Hypericum Perforatum

Selçuk Aktürk<sup>1</sup>, Özcan Dere<sup>2</sup>, Sultan Köşeroğlu<sup>1</sup>, Alper Aksözek<sup>3</sup>, Okay Nazlı<sup>2</sup><sup>1</sup>*Muğla Sıtkı Koçman University School of Science, Muğla, Turkey*<sup>2</sup>*Department of General Surgery, Muğla Sıtkı Koçman University School of Medicine, Muğla, Turkey*<sup>3</sup>*Department of Medical Microbiology, Muğla Sıtkı Koçman University School of Medicine, Muğla, Turkey***Objective:** Increasing intravenous catheters-related infections, both in inpatient units and outpatient units, lead to life-threatening severe mortality and morbidity. The formation of colonization and infection in the catheter lumen is directly related to the formation of microbial biofilms on the catheter surface. The eradication of microorganisms in biofilm can be difficult with traditional treatment methods. Antibiotic penetration into the biofilm is difficult. For this reason, such a project has been carried out with the aim of reducing cost, shortening the length of hospital stay, and reducing resistance to antibiotics and related costs.**Material and Methods:** After the herbal material extraction was achieved in the polyurethane production laboratory conditions, *C. Albians* was used first in the study. However, because of inability to obtain sufficient efficiency, two additional microorganisms, *Gr + S. aereus* and *Gr-E. coli*, were also added. The inhibition effect of hypericum perforatum extract on biofilm was determined by microplate biofilm method. The inhibitory effect of 100 mg/mL hypericum perforatum extract on the biofilm formation of *S. aereus* bacteria was detected as 56.85% when compared to the control group. This ratio, which was added to the catheter, was determined to be 92.85% in the continuance of the study. In other words, 90% less biofilm formation was observed on the catheter containing hypericum perforatum extract.

**Results:** In the well diffusion assay, the antimicrobial effect of the hypericum perforatum extract on the *C. albicans* strain was not observed. Similarly, a strong antimicrobial activity against the Gr (+) *S. aerous* strain was detected, while no activity against a Gr (-) strain *E. coli* was observed. It has been shown that the antimicrobial catheter produced from the polyurethane materials containing hypericum perforatum extract can prevent the probable formation of *S. aureus* type microorganisms due to the prolonged usage, but cannot prevent *Candida albicans* and *Escherichia coli* type microorganisms. If antimicrobial catheters that are produced unconventionally and inhibit the formation of biofilms are used, the expectation of reducing the antibiotic resistance of the patient and perhaps the need of antibiotics will be met.

**Keywords:** Catheter, biofilm, hypericin

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## PP-0146 [Surgical Site Infection, Surgical Intensive Care]

# The Effect of Polyglactin 910 Mesh Folding on Infection and Mesh Shrinkage in the Abdominal Wall of Rat

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**Objective:** The aim of this experimental study is to investigate the effect of Polyglactin 910 mesh folding on the frontal wall of the rat abdomen on surgical site infection and mesh shrinkage.

**Material and Methods:** Our research was carried out after obtaining approval from Hacettepe University Faculty of Medicine Experimental Animals Ethics Committee, with the 5.5.2016 dated and 2015/94 registration and 2015/94-01 numbered permission. Forty rats were divided into four groups. Groups 1 and 2 were identified as the control groups. Polyglactin 910 meshes with 20x20 mm size and folded 40x20 mm size, respectively, were fixed to the anterior abdominal walls of the rats in both groups by using prolene sutures. Their skins were closed by dropping a half milliliter of physiological saline solution. In Group 3 and Group 4 subjects, the anterior abdominal walls were fixed with 20x20 mm and folded 40x20 mm Polyglactin 910 meshes, respectively, by using prolene sutures. Then, 0.5 ml 1x10<sup>9</sup> cfu/ml *S. Aureus* was applied on the patches and their skins were closed. On the eighteenth day, the skin was opened after sacrifice and the images were taken. With the help of image J program, surface areas were calculated. After that, the meshes were removed and the colonies were counted after performing necessary procedures. In the meantime, the values of Crp and procalcitonin were measured in order to detect possible systemic infection indications in rats.

**Results:** There was no statistical difference in terms of mesh shrinkage in all groups. The highest bacterial colonization was detected in the 4th group (4330±2714 cfu/ml). However, there was no statistically significant difference between the groups using single and double-fold mesh. The value of Crp was found to be higher in the group applied double-fold patch (p <0.02). The highest value was detected in the second group (0.0519±0.008 ng/ml±SD). While the procalcitonin value was found to be highest in the first group (65.36 pg/ml), there was no statistically significant difference between the groups.

**Conclusion:** In this study, in which the effects of Polyglactin 910 mesh folding on the development of surgical site infection and mesh shrinkage were investigated, it was determined that the mesh folding increased bacterial colonization. Although none of our subjects developed a surgical site infection in our study, it should be considered that the increase in bacterial colonization is a facilitating factor in the development of surgical site infection. The absence of a difference in mesh shrinkage between the groups might have resulted from the short duration of follow-up, the detection of the patches before the creation of the defect, and the early absorption of the used mesh. This study was prepared as a dissertation. No financial support was received. There is no conflict of interest.

**Keywords:** Mesh, shrinkage, folding, surgical site infection

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## PP-0147 [Surgical Site Infection, Surgical Intensive Care]

# Our VAC Experiences on Abdominal Wounds

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**Objective:** Wound healing is a complex process. This process begins with the removal of the debris from the wound environment and continues with the control of infection, angiogenesis, formation of granulation tissue, contraction, and maturation. The Vacuum-assisted closure (VAC) method, which was developed in the last century, is a technique increasing wound healing speed by creating the necessary environment for wound healing. In this study, we aimed to present our experience on VAC-assisted wound healing in the abdominal region in a period of one year.

**Results:** We performed abdominal VAC in 14 patients for one year. Eight of these patients were male and 6 were female. The average age was 48 years. Four of the patients had DM as the comorbid disease. The VAC therapy was applied after abdominoplasty in 2 patients, after incisional hernia repair with dual mesh in one patient, due to open abdomen in 3 patients, due to wound at the edge of ostomy in 2 patients, and to the region where specimens were excised in the laparoscopic surgery in 6 patients. As a complication, enterocutaneous fistula developed in a patient who underwent VAC for wound site infection after abdominoplasty. Hematoma did not develop as a complication in any patient. Two of our patients died due to their primary diseases independent of VAC administration. Full wound healing was achieved in 12 patients. All of these patients were performed primary closure. The average length of hospitalization was 23 days (6-72). The average number of VACs that were applied was determined as 3.9 (2-15).

**Conclusion:** Difficult wound care often involves a multidisciplinary approach. In our study, we see that the recovery period of the patients was shortened, the duration of hospitalization due to hospital wound site infection was decreased, and the VAC therapy accelerated wound proliferation by using the VAC application in the injured abdominal region.

**Keywords:** Vacuum-assisted closure, VAC, abdominal injury, wound site infection

## PP-0148 [Surgical Site Infection, Surgical Intensive Care]

# Evaluation of Current Attitudes of Surgeons on Surgical Prophylaxis

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**Objective:** It is estimated that surgical site infection (SSI) develops in 2-3% of more than 30 million patients who undergo surgery every year in the USA (1). It is extremely important for hospitals to know their own flora and antibiotic susceptibility status, and accordingly to determine their prophylaxis and treatment strategies. Our aim in this study is to evaluate the current attitudes of surgeons about surgical prophylaxis and to determine the issues that need to be addressed in the context of the trainings that can be done in our hospital.

**Material and Methods:** In this study, surgeons who worked at our hospital and accepted to fill out the questionnaire form on their knowledge and attitudes about surgical prophylaxis on February 2018 were applied a survey. Genders, branches, and occupational periods of participants were recorded.

**Results:** A total of 63 surgeons, including 39 (62%) male and 24 (38%) female, participated in the study. The demographic characteristics of the participants are shown in Graph 1, 2 and 3 and the distributions of survey results according to sex, occupational duration and related branch. The results of our study were shared with the relevant clinics and the hospital management.

**Conclusion:** The prevention of surgical site infections is known to reduce the rate of morbidity and mortality, the length of hospitalization, and costs (2). The purpose of the antibiotic used in surgical antibiotic prophylaxis is to reduce the possible contamination burden that may occur during the operation to the minimum level. The goals of antimicrobial prophylaxis are to prevent SSI, to decrease postoperative mortality and morbidity, to decrease the length of hospitalization and costs, to prevent the development of drug-induced side effects, and to avoid the occurrence of negative changes in patient and hospital flora (3). The use of unsuitable antibiotics is common in the surgical antibiotic prophylaxis. This improper use of antibiotics can lead to an increase in the cost and in the antibiotic resistance. It is recommended in many guidelines that the hospitals should intermittently review their surgical antibiotic prophylaxis attitudes and the obtained results should be reported back to the surgeons at the relevant clinics.

In conclusion, we think that it is very important the hospitals to have their own institutional guidelines on surgical prophylaxis in accordance with other scientific guidelines, to prepare and apply these guidelines in cooperation with the related surgical units, and to report the feedbacks to the relevant clinics and the management, and to conduct the process multidisciplinary way. Surgical prophylaxis should be paid attention by all surgeons and prophylaxis protocols should be followed.

**Keywords:** Antimicrobial prophylaxis, surgical site infections, attitudes of surgeons

## PP-0149 [Surgical Site Infection, Surgical Intensive Care]

# A Rare Complication of Gallstones Forgotten after Laparoscopic Cholecystectomy: Tranversus Abdominis Muscle Abscess

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In the treatment of symptomatic cholelithiasis, laparoscopic cholecystectomy is the most common and the best treatment method in our country as in the world. However, it has some complications. From these complications, gallstones in the abdomen are not often seen. These gallstones in the abdomen are a source of post-operative infection and infection often occurs in the early period. It is rarely seen in the late period. Our 49-year-old patient had a history of laparoscopic cholecystectomy performed 5 years ago. In the radiological imagings of the patient, a 3x2 cm multiloculated cystic, space-occupying formation that was centralized in the abdominis muscle and an abscess lodge in the superior part extending to the right lateral area of the liver were observed. The patient was operated, the gallstones and the abscess lodge were cleaned, and the patient was discharged with recovery.

**Keywords:** Intraabdominal abscess, laparoscopic cholecystectomy complications, m. transversus abdominis

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PP-0150 [Surgical Site Infection, Surgical Intensive Care]

## Retrospective Analysis of Open Abdominal Management Results: Single Center Experience

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**Objective:** Open abdominal technique has become a standard approach in abdominal compartment syndrome as well as abdominal nightmare scenarios. In addition to saving the patient's life, it is aimed to close the abdomen in a healthy way before the discharge and to improve the results. When considering the wide spectrum of underlying diseases in these patients, it is increasingly difficult to determine the standardized treatment. This study examines the outcomes of patients with open abdomen.

**Material and Methods:** At our center, patients undergoing open abdominal management between January 2011 and December 2017 were retrospectively reviewed. All adult patients were included in the study, except for patients who were performed solid organ transplantations. Patients' demographic characteristics, underlying causes, treatment process, and outcomes were examined.

**Results:** Fifty-four of the 77 patients undergoing open abdominal management were included in the study. Of the patients, 74.1% were female; the median age was 59.5 (24-80) years. In the preoperative assessment, 85.1% of the patients were observed to be ASA II or III. Open abdomen management was required due to the complications of the previous operation in 35 of the patients (64.8%), secondary peritonitis in 17 (31.5%) of the patients, and burns in 3.7% of the patients. Malignancy was present in 74.1% of all patients. Primer abdominal wall closure was achieved in 13 of the patients (24.1%). The mean duration of hospitalization was 41.4±28.2 days and the median number of procedures per patient was 4 (1-30). The mortality rate was 53.7%.

**Conclusion:** Open abdominal management is a technique that is life-saving in certain patients and should be urgently applied. However, there are difficulties in terms of the choice of open abdominal techniques and the reported outcomes due to the wide range of patients and diseases. Multi-center prospective studies are needed in this regard.

**Keywords:** Open abdomen, intraabdominal sepsis, abdominal closure

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PP-0151 [Surgical Site Infection, Surgical Intensive Care]

## Factors Affecting the Development of Postoperative Wound Site Infection in Colorectal Cancer Surgery

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**Objective:** The most common complication after colorectal surgery is surgical site infections. Surgical site infection is an important burden in terms of reduced quality of life, prolongation of hospital stay, increased possibility of morbidity and mortality, and additional costs. Our aim in our study is to determine the surgical infection rates after colorectal cancer surgery and to detect the risk factors causing surgical infection.

**Material and Methods:** In this study, 269 patients who were performed surgery due to colorectal cancer in Sakarya University Training and Research Hospital General Surgery Department between 2016 and 2018 were retrospectively evaluated for postoperative deep and superficial surgical site infection. Patients' ages, gender, type of operation, surgery's being laparoscopic, robotic or open, emergency or elective operation, the presence of comorbid disease, antibiotic use only in prophylaxis or treatment dose, the presence of stoma, preoperative values of albumin, hemoglobin, RDW and MCV, and postoperative superficial and deep surgical infection rates were evaluated. Each patient was administered antibiotic prophylaxis with 2 g cefazolin and 500 mg metronidazole 30 minutes before the operation. Cultures were taken from each patient who was considered to have infection and appropriate antibiotic treatment was given.

**Results:** Of the patients, 65.4% were male and 34.6% were female. The rate of colorectal cancer patients operated due to ileus in emergency conditions was detected to be 20.1% (n=54). While open technique was applied in 210 patients, laparoscopic and robotic methods were used in 39 and 20 patients, respectively. Postoperative surgical infection rate was found to be 13.8% (n=37). Of postoperative infections, 11.9% (n=32) were superficial and 1.9% (n=5) were organ-space infections. While the existence rate of infection was 11.7% in patients under 65 years of age (n=128), it was 15.6% in those over 65 years of age. Surgical field infection was detected in 13% of the 54 patients (n=7) who were operated under emergency conditions and in 14% (n=30) of 215 patients operated under elective conditions. While the rate of infection was found to be 26.1% (n=29) in 111 patients with one or more comorbid diseases, it was found to be 5.1% (n=8) in 158 patients without comorbid diseases ( $p < 0.05$ ). Stoma was opened in 40.5% (n=109) of the patients. While surgical site infection was detected in 18.3% (n=20) of 109 patients who were treated with stoma, it developed in 10.6% (n=17) of 160 patients without stoma ( $p < 0.05$ ). In 24 patients not given postoperative antibiotherapy, the infection rate was 13.9% (n=3). On the other hand, it was 12.5% (n=34) in patients given postoperative antibiotherapy.

**Conclusion:** The rates of surgical site infection developing after colorectal surgery have been reported between 3% and 20% in the literature. Our infection rate was 13.8% (n=37), which was consistent with the literature. In our study, age, the presence of comorbid diseases, and peroperative stoma opening increased the rate of postoperative surgical field infection. In our study, advanced age, the presence of comorbidity, and operations performed in emergency conditions increased the postoperative antibiotic use. According to our results, postoperative routine antibiotic use does not decrease the infection rate and it should be applied in selected patients after colorectal surgery in accordance with the guidelines.

**Keywords:** Colorectal cancers, surgical site infections, antibiotherapy

## PP-0152 [Surgical Education]

# Is Laparoscopic Surgery a Disadvantage for Left-Hand Dominant Surgeons?

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**Objective:** Although the rate of left-hand dominant people is not known, it is estimated to be 2-30% across the world and 7.6% in the Turkish population. It is thought that the left-handed surgeons are more careful for selecting the type of surgery. In this questionnaire study, it was aimed to investigate the difficulties of the left-handed surgeons in laparoscopic surgery in our country, the positive and negative aspects of left-hand dominance, and their need to develop their right hand.

**Material and Methods:** The questionnaire used in the study was prepared by adding and removing items based on the surveys in the previous studies. It was published on the announcement page of the Turkish Society of Surgery and sent to the surgeons by e-mail and delivered by hand in various regional surgical meetings for the surgeons to fill in. In this way, 127 participants completed the questionnaire forms. The questionnaire consisted of Part I, in which surgeons' demographic features, surgical, occupational and laparoscopic experiences were asked, and Part II, which was completed by left-hand dominant surgeons.

**Results:** Of the 127 participants in the study, 104 (81.9%) were above the age of 35 years, 113 (89%) were male and 14 (11%) were female. Of the participants, 111 (87.4%) were specialists, 16 (12.6%) were residents, and 67% were still working at a Training and Research Hospital. 87 (78.4%) of the 111 (87.4%) specialists were general surgery specialists for less than 10 years. 83.7% of the participants had completed their residency at a "Training and Research Hospital". While all participants (100%) performed laparoscopic cholecystectomy, 25.2% performed laparoscopic "sleeve gastrectomy" and 9.4% performed laparoscopic colorectal surgery. Of the participants, 116 (91.3%) were right-handed and 11 (8.7%) were left-handed. The most challenging surgery for left-handed surgeons was laparoscopic inguinal hernia surgery. Nine (81.8%) of the left hand dominant surgeons (n=11, 8.7%) stated that they used their right hands as functional as the left hand. The most difficult surgical instruments for left hand dominant surgeons (n=11, 8.7%) were scissors, endostapler, endoclip, energy devices, retractor and dissector, respectively. All of the left-hand dominant participants stated that they did not receive any additional counseling or mentoring for left-hand use during laparoscopic surgery training, they did not look for endoscopic surgical instruments designed for left-handed surgeons

when performing laparoscopic surgery, and they did not believe in that endoscopic instruments should be developed for left-handed surgeons. Moreover, 8 (73%) stated that left hand dominance was not a disadvantage for laparoscopic surgery, 10 (91%) mentioned that left hand dominance did not make laparoscopic surgery difficult, 9 (82%) did not require the adjustment for laparoscopic port access, and 6 (55%) stated that they had difficulty in learning laparoscopic surgery.

**Conclusion:** Left hand dominant surgeons are in the minority in the surgical community. Therefore, their training in laparoscopic surgery and the difficulties they encounter, the left hand dominance-associated problems and disadvantages are not even considered today, but their adaptation to situations by improving their right hands, changing port locations, and avoiding advanced laparoscopic procedures are observed. There is a need for up-to-date studies that will demonstrate the importance of this issue.

**Keywords:** Left hand, laparoscopy, surgery

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## PP-0153 [Surgical Education]

# The Effect of Training and Inspection on the Standardization and Quality of Surgical Notes

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**Objective:** The quality of the surgical notes is important both in terms of medical and legal aspects. Well-documented records are essential for early patient care, long-term follow-up, and academic research. However, there is insufficient information on how to write a standard surgical note in basic surgical books and in the literature. In this study, the hypothesis that the quality of surgical notes could be improved by Training and inspection was investigated.

**Material and Methods:** The surgical notes of 150 patients operated in our clinic on April 2016 was inspected for compliance with the 'Royal College of Surgeons Guidelines'. Equal numbers of endocrine surgery, gastrointestinal surgery, and emergency surgery notes were included in the study. Then, in-clinic training meeting was organized, the results of the audit were presented, the missing aspects were highlighted, and the existing guidelines were explained. Tables with guide parameters were placed to the side of the surgical notebook. Eight months later, the surgical notes of the same number of patients in the same units were re-evaluated and two groups were compared.

**Results:** On the first inspection, 14 of the 18 parameters in the guidelines were detected to be written with more than 90% accuracy and 4 parameters were found to be written inadequately. These inadequate parameters included the duration of operation (0%), emergent or elective procedure (0%), features of the used prosthesis (65%), and detailed definition of the used closure technique (37%). At the second inspection done after eight months, a significant, but not full, improvement was observed in these four parameters (28%, 29%, 82% and 75%, respectively).

**Conclusion:** This study has shown that the accuracy of the surgical documents can be improved by the surgeon's training and inspection. Additional methods are also needed to make the surgical notes complete. Standardization in this study was provided by compliance with the Royal College of Surgeons Guidelines. By designing a national guidelines for writing surgical notes, standardization across Turkey should be ensured.

**Keywords:** Surgical note, assistant training, surgical quality standards

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## PP-0154 [Surgical Education]

# The Significance of Controlling the Specialization Training by a Single Center in the Department of General Surgery at Training and Research Hospital: Our Experience of Surgical Training and Research Center

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**Objective:** The training in the Training and research hospitals was the responsibility of the clinical chiefs before the Decree Having Force of Law Numbered 663, adopted in 2011. The standard of Training varied among the clinics. After the Decree Having Force of Law Numbered 663, the clinics were unified and the responsibility of specialist training was given to the training su-



pervisor appointed by the hospital director. In our country, there are no regulations for the training of specialists. The Center for Surgical Training and Research (CSER) was established within the body of our department in 2013 in order to make the training of specialization institutionalized by one hand and to be made according to certain standards and criteria. The aim of this study is to evaluate the contribution of CSER to the training of specialists.

**Material and Methods:** The Center for Surgical Training and Research in Ankara Numune Training and Research Hospital (AN-ERH) includes a team including a chairman, the directors of the general surgery branches, and two specialists from each branch. Its duties include to raise the level of specialist training to higher levels and to increase its scientific activities qualitatively and quantitatively. The duties of the CSER are as follows: to provide orientation, work schedule, resident chair, information leaflet for the new residents, to make the residency exam twice a year, to provide the supervision of the residency reports, to make the residency seniority examinations, to ensure that the residents participate in the Turkish Surgical Association (TSA) proficiency examinations, to determine and follow the dissertations, and to organize the examinations after specialist training. CSER's tasks on the subject of clinical training programs include to organize and perform annual training programs within and outside the group. The duties of CSER on scientific research activities are to establish the necessary infrastructure for increasing the scientific research, to support the scientific research proposals, to encourage the assistants in this issue, and to provide regular and detailed collection of the data about the patients.

**Results:** Since 2013, 26 dissertations have been completed in our clinic in the supervision of CSER, and thesis follow and defense have been provided. During the 4 year period between 2014 and 2017, 8 residency examinations were held twice a year and their results were evaluated, according to which the necessary revisions and improvements were made in the encouragement and training of the residents. In a 4-year duration from the period of 2014-2015 to the period of 2017-2018, a total of 26,5 courses were carried out. Of these, 55 were resident courses, 28 were panels with the title of 'Let's discuss with cases', 19 were the presentations of guest speakers from other clinics, and 4 were panels with the title of "expert opinion on controversial issues". Also during this time, the residents were encouraged to submit presentations, posters, and notifications to the National Surgical Congress and branch congresses.

**Conclusion:** In major clinics such as ANERH Department of General Surgery, where there are many educators, specialists, and assistants and also branching out, to provide a certain qualification and standards in specialist training is possible with the presence of an organizational structure that plans, inspects, and follows theoretical and practical training. It is essential to have clear written standards in specialist training and to follow them for training competent specialists. In our clinic, the example of CSER has closed the gap of such a institutional structure in specialist Training. The quality of Training has increased and scientific researches have increased.

**Keywords:** Surgery, training, thesis, specialization

## PP-0155 [Surgical Education]

# Compulsory Service Adventure; to Evade or to Improve Yourself?

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**Objective:** Evaluation of compulsory or non-compulsory services within compulsory service period

**Material and Methods:** The records between 21.09.2016 and 28.02.2018 covering the period from the compulsory service period in Şanlıurfa Viranşehir State Hospital until the appointments among the provinces were examined. The data obtained from the hospital's recording system on admissions to the outpatient clinic, endoscopy, colonoscopy, surgeries, and other services were retrospectively evaluated in numerical basis.

**Results:** 8 A total of 11,233 normal outpatient clinic examinations, 770 emergency or inpatient consultation services, 3756 inpatient visits, 837 intensive care visits, 284 abscess drainages, 23 tissue biopsies, 8 arterial or central venous catheterization, 924 wound dressings, 88 wound debridements, 37 incision suture, 22 retroscopy, 118 colonoscopy, 325 upper gastrointestinal system endoscopy, 12 diagnostic laparotomy, 6 diagnostic laparoscopy, 67 abdominal hernia repair with and without graft, 105 inguinal hernia repair, 3 gynecomastia correction, 10 mass excision from the breast, 1 modified radical mastectomy, 2 axillary dissection with breast preserving surgery, 8 abdominoplasty, 126 pilonidal sinus excision, 213 anal and perianal intervention, 255 appendectomy, 198 laparoscopic and 4 open cholecystectomy, 3 choledochotomy T-tube drainage operation, 6 liver hydatid cyst operation, 40 benign mass excision, 19 bilateral total thyroidectomy, 2 parathyroidectomy, 2 rectocele repair, 4 laparotomy in bride ileus and bridectomy, and 6 primary suture for small bowel perforation were performed.

**Conclusion:** I believe that the maximum service is provided during an intensive work in the district conditions. Effective compulsory service period makes positive contributions to professional experience.

**Keywords:** Compulsory service, operation, surgery

## PP-0156 [Endocrine Surgery]

# Comparison of Conventional, Harmonic System and Thermal Welding Methods in Bilateral Total Thyroidectomy

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Especially in endemic regions such as our country, thyroidectomy has been frequently performed in general surgery clinics since it was first defined. Because even a minor bleeding during thyroid surgery will prevent to observe the structures such as the Recurrent Laryngeal Nerve and parathyroid glands, it is very important that the environment is free of blood. In our study, the uses of conventional method, harmonic system and thermal welding systems in patients undergoing bilateral total thyroidectomy in an endemic goiter region were compared with regard to surgical duration, preoperative and postoperative amounts of bleeding, and complications.

The study included 60 patients who were planned to undergo bilateral total thyroidectomy in Karabük University Karabük Training and Research Hospital General Surgery Department between June 2013 and August 2014. The patients were randomly divided into three groups. Each group consisted of 20 patients. All the operations were performed by the same surgical team. In Group 1, all vessels of the thyroid lobes were ligated by using conventional suture and cut. In Group 2, all vessels were applied thermal welding method. And, in group 3, coagulation and cutting processes were carried out by Ultracision® Harmonic Scalpel® (Ethicon Endo Surgery, Cincinnati, Ohio, USA).

A total of 60 patients were included in the study and each group consisted of 20 patients. When the surgical durations were evaluated, the mean length of operation was 63,25±28,66 min in Group 1, 42,60±20,14 min in Group 2, and 49,60±9,17 min in Group 3 (p<0,05). The shortest period was obtained in the Thermal Welding group when the groups were compared with each other (p<0,017). In terms of preoperative and postoperative bleedings, the amount of bleeding was 93,50±56,05 ml in Group 1, 25,60±15,21 in Group 2, and 62,50±23,31 ml in Group 3. The amounts of postoperative bleeding were 124,50±153,09 ml, 8,75±11,68 ml, and 35,75±25,91 ml, respectively (p<0,05). In terms of hemostasis, 2 patients in Group 1 required hemostasis within the first 24 hours and no hemostasis was required in Group 2 and 3 (p=0,12). When evaluated in terms of Ca and parathormone, the Ca values were 8,39±0,56 mg/dl in Group 1, 8,34±1,14 mg/dl in Group 2, and 8,37±0,78 mg/dl in Group 3 (p=0,86) and parathormone levels were found to be 52,72±35,85 pg/dl, 34,77±20,0 pg/dl, and 56,41±36, 56 pg/dl (p=0,09), respectively. In terms of complications, transient hoarseness was not seen in any patient in Group 1, but it was observed in one patient for each Group 2 and 3 (p=0,59).

In conclusion, we can say that thermal welding in thyroid surgery can be used safely because it reduces the amount of preoperative and postoperative bleeding, shortens the operation time, decreases the complication rates, and has lower cost values.

**Keywords:** Thyroidectomy, conventional, thermal welding, harmonic system

## PP-0157 [Endocrine Surgery]

# The Relationship between Thyroid Gland Weight and Postoperative Complications in Patients Undergoing Total Thyroidectomy

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**Objective:** The most common complications developing after total thyroidectomy are hypocalcemia, vocal cord paralysis (VCP), bleeding, infection, and adjacent organ injuries. In this study, it was aimed to retrospectively evaluate the results of postoperative thyroid weight effects in patients undergoing total thyroidectomy, to identify the causes leading to postoperative complications and to determine the precautions for these causes.

**Material and Methods:** In this study, 263 adult patients who were performed total thyroidectomy in Erciyes University Medical Faculty Hospital between January 2011 and October 2015 were evaluated. Hospital automation system and patient files were reviewed retrospectively and the data were recorded. The demographic characteristics of the patients, preoperative imaging methods such as USG, scintigraphy and tomography, preoperative laboratory values, preoperative diagnoses, operations, cervi-

cal lymph node dissection (LND), postoperative pathologic diagnoses and specimen weights, bleeding, seroma accumulation, hypocalcemia, vocal cord paralysis, and postoperative complications such as infection were investigated.

**Results:** The incidence of total complications was 24.3% and these were detected to be hypocalcemia, VCP, hemorrhage in the surgical site and seroma. The rate of transient hypocalcemia was 20.1% (n=53) and the rate of permanent hypocalcemia was 1.5% (n=4). The rate of transient VCP was 0.3% (n=1) and no permanent VCP was seen in the patients. In patients without postoperative hypocalcemia, the median thyroid weight was measured as 50 gr, in hypocalcemia group as 40 gr (p=0,283). There was no significant relationship between the variability in thyroid weight and the development of postoperative hypocalcemia. However, there was a statistically significant relationship between cervical LND (p=0.006) and cervical dissection site (p=0.031) and postoperative complication development. In multivariate analyses, female gender and LND were found to be risk factors for the development of postoperative complications.

**Conclusion:** The most common complications after total thyroidectomy were hypocalcemia (21.6%), bleeding (1.5%), seroma (0.7%) and vocal cord paralysis (0.3%). Performing cervical LND with total thyroidectomy and female gender were found to be significant risk factors for the development of postoperative complications in multivariate regression analyses. There were no statistically significant results in our study for the risk factors that increase the incidence of postoperative complications, such as thyroid gland weight, history of thyroid surgery, malignancy of thyroid pathology, retrosternal localization of the thyroid tissue, and hyperthyroidism, which is inconsistent with literature findings.

**Keywords:** Hypocalcemia, complication, thyroid weight, total thyroidectomy

## PP-0158 [Endocrine Surgery]

# Double Pyramidal Lobe Detected During Surgery

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**Introduction:** Thyroid gland may display various anatomic variations during the embryonic development. The most common of these variations is the pyramidal lobe. The pyramidal lobe is the embryological remains of the thyroid gland at the caudal end of the thyroglossal canal. It has an important place in the diagnosis and treatment planning of thyroid diseases. The double pyramidal lobe is quite rarely encountered.

**Case:** A 54-year-old female patient with no known disease was palpated with a nodule consistent with right thyroid gland during examination, no additional pathology was observed. Total thyroidectomy was performed to the patient who was diagnosed with papillary carcinoma through FNAB (fine needle aspiration biopsy). The pyramidal lobe was seen from both sides of the trachea and the resection was completed by preserving the integrity of the thyroid gland. Pathology; papillary carcinoma of the right lobe of the thyroid. The patient was discharged with recovery on the first postoperative day.

The pyramidal lobe can be considered as an anatomical anomaly, a morphological variation, or a typical piece of the thyroid gland. Pyramidal lobe can originate from right - left lobes and isthmus. It can occur in various forms (Y, inverse Y and nodular form) and its prevalence is 12-65%.

The pyramidal lobe has an important place in the diagnosis and treatment of benign and malignant diseases. Total excision of the thyroid gland can be planned during the treatment of diffuse thyroid diseases. Pyramidal thyroid residues (residual thyroid tissue) cause the recurrence of disease after many years following the inadequate total thyroidectomy.

**Conclusion:** Diagnosis and treatment after recurrence will increase the cost. The reoperation, which is performed when recurrence occurs, has a higher risk of complications than carefully performed long primary total thyroidectomy.

The double pyramidal lobe is an extremely rare anatomic variation of the thyroid gland. It should be considered during surgery that the pyramidal lobe may be bilateral or not detected by preoperative imaging methods.

In our case, there were no findings in the preoperative imaging methods, but a double pyramidal lobe was detected after a carefully performed dissection and it was totally excised. It was also demonstrated through postoperative scintigraphy.

**Keywords:** Thyroid gland, pyramidal lobe, scintigraphy

## PP-0159 [Endocrine Surgery]

# Evaluation of Patients Undergoing Incidental Parathyroidectomy after Total Thyroidectomy: A Restrospective Study

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**Objective:** In this study, the evaluation of patients who underwent incidental parathyroidectomy after total thyroidectomy was presented.

**Material and Methods:** Patients who underwent thyroidectomy between January 2011 and March 2017 were evaluated retrospectively from their file records. The demographic characteristics of pathological diagnoses of the patients who were performed thyroidectomy were evaluated. From the specimens sent to the pathology, the number of excised parathyroid glands and their localizations were detected. Postoperative PTH was evaluated. On the second day, the value of calcium was checked. The patients with decreased PTH and calcium values were applied calcium replacement. The dose of calcium replacement was decided according to the biochemical values. After the patients were discharged, hypocalcemia was determined as permanent or temporary by evaluating calcium and PTH values in the control examinations in the outpatient clinic.

**Results:** Of 142 patients, 23 were male (16.2%) and 119 were female (83.8%). Their mean age was 49,5 years. Total thyroidectomy was performed in 131 patients, bilateral subtotal thyroidectomy in 3 patients, left total right subtotal thyroidectomy in 3 patients, right total left subtotal thyroidectomy in 2 patients, left thyroid lobectomy in 2 patients, and complementary thyroidectomy in one patient. Two of patients were performed unilateral neck dissection (levels II, III, IV, and V) and 82 patients were applied central lymph node dissections.

It was observed that the parathyroid tissues of 31 patients were removed incidentally. Of these patients, 29 were female and 2 were male. Five of the excised parathyroid tissues were intrathyroidal, 15 were located in and along the thymus tissue, and 5 were located in the central lymphatic fat tissue. Calcium levels below 8 mg/dL were considered to be consistent with hypocalcemia. The development of hypocalcemia findings was observed in patients whose serum PTH levels were below 15 pg/dL. Of these patients, 42 had transient hypocalcemia and 2 had permanent hypocalcemia.

**Conclusion:** In this study, it was postoperatively seen that even though the thyroid surgery was made in the experienced hands, there were unwantedly excised parathyroid glands. We suggest that postoperative PTH level is important in determining hypocalcemia and it protects patients against the risks caused by hypocalcemia.

**Keywords:** Thyroid, parathormone, thyroidectomy

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## PP-0160 [Endocrine Surgery]

# Relation of Body Composition Analysis Data with Hypocalcemia after Total Thyroidectomy

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**Objective:** Hypocalcemia is a common, often transient, and curable complication of thyroid surgery. However, it is not exactly known which patient will develop it, and it often occurs in the late postoperative period. This leads to longer hospitalization or unnecessary calcium prophylaxis. Therefore, the prediction of whether hypocalcemia will develop after total thyroidectomy in patients is important for optimal discharge, treatment planning, and follow-up. The aim of this study is to reveal the relationship between body composition parameters obtained by bioelectrical impedance analysis and hypocalcemia after total thyroidectomy.

**Material and Methods:** A total of 113 patients were included in this prospective study. Patients were divided into two groups as those developing biochemical hypocalcemia (calcium <8 mg/dL) and those not developing biochemical hypocalcemia (calcium ≥8 mg/dL) according to their postoperative calcium levels and groups as those developing and not developing symptomatic hypocalcemia according to their clinical features. Then, the association of the groups with individual body component parameters was evaluated. In addition, the other patient- and disease-related factors were also evaluated in terms of their relationship with hypocalcemia. The results were presented as mean, median, and frequency. The value of p<0.05 was accepted to be statistical significant.

**Results:** Of the patients, 95 were female and 18 were male, and the mean age was 50.7±12.9 (23-78) years. None of the patients had permanent hypocalcemia in the follow-ups. All of the hypocalcemia cases that were detected were transient. Symptomatic hypocalcemia was found in 23 patients (20.3%) and biochemical hypocalcemia was detected in 26 patients (23.0%). Height, weight, body mass index, body fat percentage, fat mass, fat-free body mass, muscle mass, bone mineral density, basal metabolic rate, metabolic age, visceral fat and obesity grade, which were obtained through body composition analysis in the preoperative period, were found to be at lower levels in patients with symptomatic hypocalcemia than in those without it. However, there was no significant relationship between these parameters and the occurrence of symptomatic and biochemical hypocalcemia. Only total body fluid was lower at the borderline significance level in the patients having symptomatic hypocalcemia than those

not having symptomatic hypocalcemia ( $p=0.050$ ). In terms of other variables, the incidence of symptomatic hypocalcemia was found to be higher in patients at older age, having a nodule greater than 40 mm, retrosternal thyroid, and specimen with a weight greater than 100 g, and undergoing parathyroid autotransplantation.

**Conclusion:** There was no significant relationship between symptomatic or biochemical hypocalcemia and body composition. However, it is quite noteworthy that the parameters related to body adiposity and obesity were found to be lower in the symptomatic hypocalcemia group and that the total body fluid in this group was measured to be significantly lower. Although studies on this subject are inadequate, the effect of obesity on calcium metabolism at the cellular level, hormonal level and visceral level is obvious. However, it is necessary to investigate whether obesity is a risk factor or a protective factor for hypocalcemia after thyroidectomy.

**Keywords:** Bioelectrical impedance, hypocalcemia, total thyroidectomy, body composition

## PP-0161 [Endocrine Surgery]

# Evaluation of Clinical and Histopathological Features of Patients Undergoing Thyroid Surgery: A Retrospective Clinical Study

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**Objective:** The purpose of this study is to assess whether there is any relationship between clinical parameters of patients undergoing thyroid surgery and permanent histopathology.

**Material and Methods:** Age, gender, complete blood count and sub-parameters, nodule diameter, nodule location, thyroid function tests and pathology reports of 505 patients who underwent thyroid surgery for any reason between January 2010 and November 2015 were evaluated retrospectively. The patients were divided into two groups as malignant ( $n=92$ ) and benign ( $n=413$ ), considering the permanent pathology results. Both groups were compared in terms of demographic and clinical parameters. For statistical analyses, methods such as Pearson's Chi-Square, Independent Sample T test, ROC Curve, and Youden Index J were used.

**Results:** This study included 406 female and 99 male patients whose ages were between 15 and 85 years. There were no statistically significant differences between the groups in terms of age, sex, WBC, neutrophil, lymphocyte, platelet, RDW, PDW, MPV, PCT, localization of the nodule and thyroid function tests. On the other hand, statistically significant differences were found between the groups in terms of nodule size ( $p=0.0001$ ), cervical lymphadenopathy ( $p=0.0001$ ), nodular calcification ( $p=0.0001$ ) and ultrasonographic examination findings ( $p=0.003$ ). Compared with the malignant group, the nodule size was significantly larger in the benign group (mean $\pm$ SD: 35.45 $\pm$ 16.89 mm versus 27.93 $\pm$ 18.34 mm). Sensitivity, specificity, positive likelihood ratio, and negative likelihood ratio were found to be 67.78%, 64.43%, 1.91 and 0.50, respectively, for the optimal cut-off value ( $\leq 28$  mm) for the nodule size obtained using the ROC Curve and Youden Index J techniques. The relationship between FNAB and permanent pathology was evaluated by cross tab technique. The sensitivity, specificity, Area Under Curve, disease prevalence, positive likelihood ratio, negative likelihood ratio, positive predictive value, and negative predictive value of FNAB were 60%, 98%, 0.79, 14.3%, 31.35, 0.41, 84% and 93.6%, respectively.

**Conclusion:** This study has shown that there are differences between the malignant and benign patient groups in terms of nodule size, cervical lymphadenopathy, nodular calcification, and ultrasonographic findings.

**Keywords:** Goiter, histopathological evaluation, permanent examples, malignancy, thyroid, thyroidectomy

## PP-0162 [Endocrine Surgery]

# Thyroid Carcinoma Showing Thymus-like Differentiation: Case Report

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**Introduction:** Thyroid carcinoma showing thymus-like differentiation (CASTLE) is a rare cancer type found on the thyroid gland or soft tissue of the neck. Its diagnosis is complicated and requires careful histopathological analysis. In this study, it was aimed to present a rare case of thyroid carcinoma showing thymus-like differentiation.

**Case:** A 66-year-old female patient was admitted to our clinic with the complaints of long-standing sore throat and swallowing difficulty. Her anamnesis had a history of hypertension and hyperlipidemia. In the physical examination, a hard and mobile mass was palpated in the medial region of the neck. No stridor or rhonchus was detected in the patient with normal respiratory sounds. In the ultrasonography, a 33x26 mm hypoechoic solid nodule with peripheral and internal blood supply was observed in the inferior area of the left thyroid lobe was reported as a lymph node without the hilus in the neighborhood of this area. In the magnetic resonance imaging of the neck, both thyroid lobes were normal in size and there was a 30x36mm nodular appearance in the the left lobe isthmus and reactive multiple lymphadenopathy in the neighborhood of this area. Nodular fine-needle aspiration biopsy result was reported as "smear including eccentric cells, rare fusiform cells, and overlapping mild hyperchromatic nucleated cells, and atypia with unknown significance". As a result of the consultation to the Department of Otorhinolaryngology, both vocal cords were reported to be natural and mobile. Because the radiological view of the nodule raised the suspicion of malignancy, operation was planned for the patient. In the operation, the thyroid tissue was severely adherent to the trachea, carotid artery and esophagus. These adhesions were dissolved and total thyroidectomy was performed to the patient having bilateral multiple nodular goiter. Two lymph nodes, which could be pathological, were excised in the left lobe central region. The patient was discharged on the second postoperative day. The result of tumor pathology was reported as 'thyroid cancer showing thymus-like differentiation'. Its pathologic features were characterized by a 3 cm tumor including apparent cellular margins, vesicular nucleus, distinct nucleolus, and mitotic active cells. Immunohistochemically, P63, Pancytokeratin and CK5/6 were found to be diffuse positive; CD5, CD117 and CEA were found to be focally positive; TTF1 was positive in a few cells; and Thyroglobulin, Synaptophysin, Chromogranin, CD56 and Calcitonin were negative in tumor cells. The lymph nodes excised as pathological lymph nodes were reported as reactive. The patient was applied a thymus cells-like protocol and postoperative adjuvant radiotherapy protocol.

**Conclusion:** There is no gold standard treatment for thyroid cancers showing thymus-like differentiation (CASTLE). Surgical treatment seems to be the first step. After surgery, adjuvant radiotherapy and/or chemotherapy is used. Because its treatment and prognosis are different from those of primary and metastatic squamous cell carcinomas of the head-neck region or squamous cell carcinomas of the thyroid, it is important to distinguish it from other cancers.

**Keywords:** Thymus, thyroid, CASTLE

## PP-0163 [Endocrine Surgery]

# Incidentally Detected Parathyroid Carcinoma in a Patient Operated due to Parathyroid Adenoma

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**Introduction:** Parathyroid carcinoma is one of the rare endocrine tumors and it constitutes 1% of the cases with primary hyperparathyroidism. Because of similar imaging methods and similar clinical findings, it is difficult to distinguish preoperative parathyroid adenomas and parathyroid carcinomas. In this case report, we planned to present a rarely seen case in a patient who was operated for the pre-diagnosis of parathyroid adenoma and whose postoperative pathology was reported as parathyroid carcinoma.

**Case:** A 70-year-old female patient was admitted with recently increased fatigue and extensive bone pain. In the laboratory analyses, the value of calcium (Ca) was 11,8, phosphore was 3,2, 25 hydroxy- Vitamin D was 15,47, and parathormone (PTH) was 1459. The thyroid USG revealed a 2.5x3 cm semisolid lesion extending into the retrosternal area in the posterior area of the thyroid right lobe. When the high parathormone value of the patient was considered, it was primarily evaluated in favor of parathyroid adenoma. In the parathyroid scintigraphy, the focally increased involvement in the right lobe inferior region of the thyroid lodge in the neck region was firstly evaluated in favor of parathyroid adenoma. The excision of the parathyroid adenoma, the localization of which was detected through imaging techniques, was planned and the patient was operated. Her postoperative calcium level decreased to 8,4 and parathormone level decreased to 15,6. The patient had no peroperative and postoperative complication and she was discharged with recovery. In the sections of 6x3x2 cm material in the postoperative specimen pathology, an encapsulated 3,5 cm tumoral tissue showing nodular growth and having parathyroid tissue on its wall was reported as "parathyroid carcinoma developing on the ground of parathyroid adenoma". It was found that there was no invasion to the surrounding soft tissue out of the capsule in the tumor and the excised lymph node was reactive and its surgical margins were intact.

**Conclusion:** Parathyroid carcinoma is one of the rare endocrine tumors and constitutes 1% of the cases with primary hyperparathyroidism. Patients usually present with the complaints of fatigue, nausea, vomiting, loss of appetite, constipation, and widespread bone pain. The incidence of parathyroid carcinoma is equal in men and women. The incidence of parathyroid carcinoma has increased in patients with a history of radiotherapy to the neck, familial hyperparathyroidism, HPT-JT syndrome, and secondary hyperparathyroidism associated with renal insufficiency. Imaging methods are helpful in determining tumor localization, but they cannot help to distinguish benign and malignant lesions. Although the final diagnosis is generally established with

postoperative pathology specimen reports, high blood calcium levels (> 14mg/dl) and high parathormone (> 5 times higher of the upper limit,> 300pg/dl) levels in the preoperative laboratory tests should typically cause clinical suspicion. Diagnostic fine needle aspiration biopsy is contraindicated because of the risk of spreading the tumor. When parathyroid carcinoma is suspected preoperatively, frozen section can be performed. However, since some similar pathologic features of parathyroid carcinoma may be observed in some benign adenomas, the frozen section procedure is generally not reliable.

Because of similar imaging modalities and similar clinical findings, it is difficult to distinguish preoperative parathyroid adenomas and parathyroid carcinomas.

**Keywords:** Parathyroid adenoma, parathyroid carcinoma, frozen, familial hyperparathyroidism, HPT-JT Syndrome

## PP-0164 [Endocrine Surgery]

# Emergency Total Thyroidectomy in a Patient Diagnosed with Pneumonia and Retrosternal Goiter: A Rare Case Report

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**Introduction:** Retrosternal goiter is seen in the world with an incidence of 0.2-5%, and patients may also present with the symptoms of respiratory distress in addition to the symptoms of thyroid function disorders. The addition of a pulmonary pathology such as pneumonia in patients with respiratory distress due to retrosternal goiter may further impair the respiratory functions. In this case report, emergency total thyroidectomy performed due to respiratory dysfunction in association with the coexistence of pneumonia and retrosternal goiter is explained.

**Case:** A 50-year-old female patient was admitted to the emergency unit with respiratory distress. Due to respiratory arrest, the patient was intubated and performed cardiopulmonary resuscitation. In the examination of the patient, diffuse consolidation areas consistent with pneumonia in the bilateral lungs and a giant goiter with retrosternal extension leading to significant rightward deviation in the trachea were detected. The patient was referred to our hospital for advanced examination and treatment and she was hospitalized in the anesthesia intensive care unit. She was consulted to the department of infectious diseases and broad spectrum antibiotherapy was initiated with cefoperazone/sulbactam and linezolid. Despite trying extubation intermittently, the patient was unable to tolerate the extubation due to tracheal deviation and compression and she was consulted to our department for emergency total thyroidectomy. In the thyroid function tests of the patient who was assessed by our department, the value of TSH was 6.056 uIU/mL, free T4 was 0.0996 ng/dL, and free T3 was 3.35 pg/mL. The patient was taken to the operating room as intubated and emergency total thyroidectomy was planned with nerve monitoring. At the exploration, it was observed that the left thyroid lobe showed retrosternal extension and it was about 10x12 cm in dimension and had multinodular structure. Although the intraoperative right vagal and recurrent laryngeal nerve were monitored, the voltage measurement of the left vagal nerve was low and the left recurrent laryngeal nerve could not be revealed. The patient with no additional intraoperative complication was extubated on the postoperative 1st day. Her antibiotherapy was continued due to pneumonia and the patient was consulted to the department of otorhinolaryngology on the postoperative 3rd day. The video laryngoscopy showed that the right vocal cord was fully mobile, but the left vocal cord was paralyzed. On the 13th day of the follow-up and on the 7th postoperative day, the treatment of pneumonia was completed and the patient was discharged. Postoperative thyroid specimen measurements are as follows; bilateral total thyroidectomy specimen that was 180 g in weight and 13x11x7.5 cm in size in total, 11 g and 6x4.5x2 cm right thyroid lobe, 3.7 gr and 3.5x1.5x1 cm isthmus, and 164.6 g and 12x7.5x7.5 cm left lobe. Thyroid specimen pathology was consistent with multinodular hyperplasia displaying the signs of degeneration.

**Conclusion:** Although surgery is often performed under elective conditions in cases with retrosternal goiter, it should not be forgotten that emergency thyroidectomy may be required with the addition of pulmonary pathologies to the current partial upper respiratory tract obstruction.

**Keywords:** Retrosternal goiter, airway obstruction, emergency total thyroidectomy

## PP-0165 [Endocrine Surgery]

# A Rare Condition in Thyroidectomy: Thyroid Hemiagenesis

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Thyroid hemigenesis is a very rare thyroid pathology that is seen as a defect in the embryonic development of thyroid tissue. To date, 329 thyroid hemianagenesis cases have been reported in the literature. This condition can usually be detected by im-

aging methods such as ultrasound, tomography and scintigraphy, which are performed with a multidisciplinary approach in the preoperative period and can be prepared during the operation. Or, it can be encountered peroperatively as in our case. It is important to have information about this rare condition and to keep it in mind.

**Keywords:** Thyroidectomy, rare, hemiagenesis

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## PP-0166 [Endocrine Surgery]

# The Nodule Reported As Parathyroid Neoplasm According To the Biopsy of Postoperative Specimen in a Patient Who Was Performed Thyroidectomy Due To the FNAB Result Interpreted As Suspected Follicular Neoplasia: A Rare Case Report

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**Introduction:** Thyroid gland nodules are nodules with cancer potential and imaging techniques-guided fine needle aspiration biopsy taken from thyroid nodules with malignancy potential helps to detect malignancy. In this case report, it was aimed to present a patient who was considered to have a thyroid nodule on ultrasonography, but suspected to have follicular neoplasm according to the result of fine needle aspiration biopsy (FNAB) taken from this nodular lesion and performed thyroidectomy, and whose postoperative specimen was interpreted to be parathyroid neoplasm.

**Case:** A 44-year-old female patient was admitted to the outpatient clinic due to the complaints of feeling of pressure on the neck and globus sensation going on for 8 months. She had a history of Type 2 diabetes. In her physical examination, there was a nodule (?) in the superior part of the thyroid gland left lobe. In the laboratory analyses, thyroid function tests were normal, fasting blood glucose was 342 mg/dl, and calcium was 10,4 mg/dl. In the ultrasonography (USG), the size of the thyroid gland was normal. A 31x19 mm hypoechoic solid lesion was observed in the posterior part of the thyroid left lobe and histological sampling for this nodule was suggested by the radiologist. The result of the USG-guided fine needle aspiration biopsy (FNAB) of the thyroid was interpreted as a suspected follicular neoplasm (Bethesda IV). Bilateral total thyroidectomy was performed to the patient. On the first postoperative day, the patient was discharged with recovery. The result of postoperative pathology specimen was reported as parathyroid neoplasia + thyroid tissue with normal margins. It was stated by the department of pathology that the tissue considered to be thyroid left lobe was completely an encapsulated parathyroid neoplasia and malignancy could not be ruled out in the present microscopic images.

**Conclusion:** Parathyroid tissue cannot be ultrasonographically visualized in normal conditions, but can be viewed with 75-80% probability in cases like neoplasia. In our case, the serum calcium level below 10,5 mg/dl, the inability to visualize the parathyroid tissue in USG, and the interpretation of the FNAB result as suspicious follicular neoplasm were primarily considered in favor of thyroid disease. Histopathological malignancy criteria in parathyroid neoplasms are invasion to the surrounding soft tissues and vital organs such as thyroid, esophagus, pharynx, and larynx, vascular, and perineural invasion, or histologically documented regional or distant metastases. In cases for which definite criteria cannot be determined, at least three of some findings such as capsular invasion, high mitosis (> 5/10BBA), intratumoral broad fibrous bands, coagulative tumor necrosis, and diffuse cellular atypia should be involved. We think the entire thyroid gland left lobe's being involved by encapsulated parathyroid neoplasm might have caused by deceptive appearance due to the formation of capsular non-neoplastic adhesions in the thyroid parenchyma over time caused by the neoplastic lesion. In addition, broad intratumoral fibrous bands and lesion were observed to partially invade the capsule in the specimens. This case had none of definite criteria for the diagnosis of parathyroid carcinoma. Possible parathyroid pathologies should always be kept in mind in patients planned to be operated for thyroid nodule because parathyroid neoplasms cannot be definitely ruled out ultrasonographically and the result of FNAB cannot eliminate the parathyroid pathology.

**Keywords:** Thyroid nodule, suspected follicular neoplasia, parathyroid neoplasm, fine needle biopsy of the thyroid

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## PP-0167 [Endocrine Surgery]

# Papillary Thyroid Cancer Case Presenting with Calvarium Metastasis

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**Introduction:** Thyroid cancers are known to have the best cure, long survival rate, and well-differentiated histological features when compared to other cancers. Papillary thyroid cancer is the most commonly encountered type and it constitutes approximately 80% of thyroid cancers. The rate of bone metastasis varies between 10% and 40%, but skull metastasis varies between 2.5% and 5.8%.

**Case:** A 77-year-old female patient was admitted to the outpatient clinic of neurosurgery due to the complaint of swelling on the scalp. She had a history of previous laparoscopic cholecystectomy and she had medication-regulated hypertensive asthma. She was performed computed tomography by the department of neurosurgery due to swelling on the cranial region. There was a heterogeneous, isodense, well-circumscribed 4,5x2,5 cm solid mass lesion with the density of 48 HU, causing destruction in the right temporofrontal region. This mass was radiologically evaluated to be multiple myeloma or eosinophilic granuloma. It was totally excised by a neurosurgeon. When the pathology of the patient was reported as papillary thyroid carcinoma metastasis, she was referred to our department. The patient whose ultrasonography revealed multinodular goiter was performed FNAB and it was interpreted as atypia with undetermined significance. Postoperative Pet CT was performed to the patient and no involvement was found except thyroid nodules in which Suv max value was measured as 10. She was applied thyroidectomy and central lymph node dissection. She was postoperatively given RAI treatment. The patient has been living for 50 months without a new metastasis.

**Conclusion:** Thyroid cancers are encountered at the rate of approximately 1% among all cancers and its incidence has increased especially in females in recent years. This rate is 2% for females and 0.5% for males in all malignancies. The incidence of thyroid cancers has increased in recent years due to the increasing prevalence of diagnostic tests. Thyroid cancers are known to have the best cure, long survival rate and well-differentiated histological features compared to other cancers. Papillary thyroid cancer is the most common type and it constitutes about 80% of thyroid cancers. Papillary thyroid cancer tends to spread lymphatically and may develop in 20% of distant metastatic cases. The most common metastases occur to the lung, bone, brain, and liver. Bone metastasis varies between 10% and 40%, but skull metastasis varies between 2.5% and 5.8%. Bone metastases may be osteolytic or proliferative. It can cause bone pain and swelling or it can also be incidentally found without giving any symptoms. As in our case, the cases of papillary thyroid carcinoma presenting with cranial mass are very rare. The survival differs in distant metastases. While the 10-year survival is 30-50% for lung metastasis, this rate is 1 year in brain metastasis.

Clinicians should keep in mind that papillary thyroid carcinomas may rarely present with metastasis to the calvarium as a distant organ.

**Keywords:** Calvarium, papillary carcinoma, metastasis

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PP-0168 [Endocrine Surgery]

## Giant Multinodular Goiter with Hyperthyroidism Resistant to Medical Treatment: Case Report

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**Introduction:** Toxic multinodular goiter usually develops in elderly individuals with a history of multinodular goiter that is often non-toxic previously. It gains sufficient thyroid nodule autonomy over several years and causes hyperthyroidism. The signs and symptoms of hyperthyroidism are similar to those of Graves' disease, but there are no extrathyroidal signs. Its standard therapy is surgery. It is important to make the patient euthyroid before surgery. In our study, we present a case with a toxic multinodular goiter that cannot be controlled by medical therapy.

**Case:** A 70-year-old female patient was admitted to our outpatient clinic due to the complaints of swelling in her neck existing for 30 years and recently developed difficult breathing and difficulty swallowing. Although she had previously been recommended to undergo surgery, she stated that she had no surgery because she was afraid. It was determined that the size of the thyroid gland was severely increased. Her arterial blood pressure was 110/85 mmHg and pulse rate was 104/min. In the ultrasonography, the size of the right lobe of the thyroid gland was measured as 81x101 mm and the size of the left lobe as 61x61 mm, and there were a lot of nodules in both lobes and isthmus, the largest of which was 6 cm in size. In blood tests, TSH was measured as 0.01 mIU/ml (Normal values: 0.27-4.2), and sT4 was measured as 93 pmol/l (Normal values: 12-22). The patient was started methimazole 2 x 20 mg and propranolol 2 x 20 mg. In blood tests performed after 3 weeks, TSH was 0,01 and T4 was 59. The patient was consulted to the department of endocrinology and 2 x 4 g of cholestyramine was added to her treatment. In the follow-ups, her thyroid functions did not normalize and she was hospitalized in the endocrinology clinic. Prednol tb 2 x 20 mg was added to her medical treatment, but her thyroid functions were not normalized after 1 month of follow-up. Then, on the council, it was decided to perform surgery after plasmapheresis. After giving three sessions of plasmapheresis, bilateral total

thyroidectomy was performed. During the operation, nerve monitoring was performed and bilateral recurrent laryngeal nerves were preserved.

**Conclusion:** The treatment of toxic MNG is surgery. Hyperthyroidism should be corrected before surgery. For this purpose, PTU, methimazole, and steroids and cholestyramine for resistant cases are used. In hyperthyroid patients who do not recover despite medical treatment, plasmapheresis should be kept in mind to restore thyroid hormone levels before surgery.

**Keywords:** Toxic multinodular goiter, hyperthyroidism, treatment, plasmapheresis

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## PP-0169 [Endocrine Surgery]

# Thyroid Hematoma Developing Without Trauma in the Neck: Case Report and Literature Review

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**Introduction:** Soft tissue injuries are relatively common after blunt trauma of the neck and they can be dangerous for many vital structures due to the complicated anatomy. Isolated trauma to the thyroid is very rare, and there are a few cases reported in the literature. The risk is higher especially in patients using anticoagulants.

**Case:** A 59-year-old female patient with known hypertension and using Clopidogrel Hydrogen Sulphate due to CVE (cerebrovascular event) was admitted to the emergency room with swelling and pain in the left frontal lobe of the neck without a history of trauma. The superficial hematoma finding was not visualized, and there was no pressure symptoms in the respiratory tract. Hematoma was observed in the left thyroid lobe in the contrast-enhanced CT scanning and improved without any surgical intervention.

**Conclusion:** Although soft tissue injuries are seen after blunt neck trauma, isolated thyroid gland injury is extremely common. It is present in about 1-2% of cases and there is an underlying pathology in the glands in most of them. Most patients consult to the emergency unit with neck swelling, pain, respiratory distress, dysphagia, and hoarseness although they are hemodynamically stable in the early stages. In the strategy of diagnosis, a sensitive decision must be made to prevent respiratory or vascular extra-trauma. While hematoma resorbs spontaneously in many patients, surgical exploration continues to be a widespread treatment strategy in unstable patients.

Although this condition is rare, physicians should keep in mind the possibility of thyroid damage, especially in those using anticoagulant without blunt neck trauma. Early diagnosis and immediate treatment can reduce life-threatening complications. Its management should be individualized according to the characteristics of the patient and the experience of the surgeon.

**Keywords:** Isolated thyroid hematoma, anticoagulant usage, thyroid compression symptoms

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## PP-0170 [Endocrine Surgery]

# Incidental Thyroid Cancer Detected in Patients with Hyperthyroidism: Single-Center Experience

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**Objective:** Hyperthyroidism is a group of diseases with many different etiologies and clinical manifestations. The most common causes of hyperthyroidism are toxic multinodular goiter, Graves' disease, and toxic adenoma. It is observed that the frequency of thyroid cancer developing on the ground of hyperthyroidism has increased in recent years. The purpose of this study is to determine the rate of incidental thyroid cancer in the cases that we have operated for hyperthyroidism and to reveal in which group of patients the surgical treatment should come to the forefront based on these findings.

**Material and Methods:** In this retrospective study, 591 patients operated due to the diagnosis of hyperthyroidism between January 2007 and June 2017 were examined.

**Results:** Of the cases included in the study, 377 (63.7%) were diagnosed with toxic multinodular goiter, 132 (22.3%) with Graves' disease, 55 (9.4%) with nodular Graves' disease, and 27 (4.6%) with toxic adenoma. In 131 (22.6%) of 591 patients undergoing surgery, thyroid cancer was detected. The distribution of them according to the disease etiology included toxic multinodular

goiter (89/131, 67.9%), nodular Graves' disease (24/131, 18.3%), Graves' disease (13/131, 9.9%), and toxic adenoma 2.8%). The most common type of cancer was micropapillary (65/131, 49.6%).

**Conclusion:** In recent years, the incidence of carcinoma in the ground of hyperthyroidism has increased. It is not very realistic to say the prevalence of thyroid carcinoma in hyperthyroidism according to the result of autopsy studies. In clinical trials, this rate seriously increases particularly in the presence of nodule. Most of the detected carcinomas are microcarcinomas having very low lymph node metastasis rate without lymphovascular invasion and their treatment is still controversial.

**Keywords:** Hyperthyroidism, thyroid cancer, incidental

## PP-0171 [Endocrine Surgery]

# Synchronous Thyroid Papillary Carcinoma and Breast Invasive Ductal Carcinoma, Case Report

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**Introduction:** Invasive ductal carcinoma of the breast and thyroid papillary carcinoma are the most common malignancies encountered in women. Nevertheless, synchronous primary tumors of the thyroid and breast are rare in clinical practice. In this study, we aimed to present our patient with synchronous thyroid papillary carcinoma and invasive ductal carcinoma of the breast.

**Case:** A 73-year-old female patient was admitted to the outpatient clinic with the complaint of palpable hardness in her right breast existing for 1 year. In the examination, a hard, fixed, irregular margined 4x3 cm mass causing retraction in the skin was found at 1.5 cm distance from the areola in the right breast at 1-2 o'clock position and 1.5 cm palpable LAP was detected in the right axilla. Hemogram and biochemical parameters of the patient were normal. The thoracic computed tomography of the patient, whose biopsy results from the right breast and axilla were reported as invasive ductal carcinoma, revealed several paratracheal, aorticopulmonary, and prevascular millimetric sized calcified-noncalcified lymph nodes. In the middle upper quadrant of the right breast, there was 33x30 mm lesion with mildly lobulated margin and nodular soft tissue density, and the presence of a few LAPs displaying cortical hypertrophy was observed in the right axilla. The patient was evaluated in the oncology council and performed the PET CT. In the PET CT, two hypodense nodules with irregular margin, displaying hypermetabolism at malignancy level in the left thyroid lobe out of the right breast and right axilla, were observed and malignant thyroid nodules were primarily considered. After the completion of preoperative preparations for the patient, whose thyroid fine needle aspiration biopsy was reported as thyroid papillary carcinoma, right modified radical mastectomy and bilateral total thyroidectomy and bilateral central neck dissection were performed in the same session. The result of pathology was reported as invasive ductal carcinoma in the right breast, ER 95%, PR 70%, CerbB2 3+, Stage IIIA. The multifocal papillary thyroid carcinoma was reported as follicular variant in thyroid pathology. The patient was directed to the oncology department and given chemotherapy, radiotherapy and RAI treatment. The patient's controls continue without problems.

**Conclusion:** Bilateral malignancy was first reported by Billroth in 1889. Despite the fact that the thyroid and breast are endocrine organs, the common point in the etiopathogenesis of the coexistence of thyroid cancer and breast cancer is not yet clear. Investigations on the existence of some patient populations with early exposure to risk factors that are common in the development of both types of tumors and genetic susceptibility to both cancers are continuing. In order to clarify the coexistence of thyroid and breast diseases, further studies on larger patient series are needed.

**Keywords:** Synchronous, breast, thyroid

## PP-0172 [Endocrine Surgery]

# Heterotopic Adrenal Tissue in the Indirect Inguinal Hernia Sac in Adults: Case Report

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**Introduction:** Ectopic adrenal tissue in the spermatic cord is a rare event in adults. Most of the ectopic adrenal tissues become atrophic in childhood and they are rarely encountered in adulthood. In this article, we aimed to present a 28-year-old male patient who had ectopic adrenal tissue that was incidentally found on the spermatic cord during the operation performed due to inguinal hernia, excised, and diagnosed with ectopic adrenal tissue in the histopathological examination.

**Case:** A 28-year-old male patient presented with the complaints of swelling and pain in the right groin existing for 6 months. His physical examination showed that the swelling was consistent with the right indirect inguinal hernia and it could be reduced. The testis was normal in the palpation. He had no history of previous surgery and undescended testis. The patient was performed Lichtenstein inguinal hernia repair. This tissue was excised due to the appearance of orange-yellow colored nodular structure in different color and consistency in the neighborhood of peroperative indirect hernia sac. The histopathologic examination revealed ectopic adrenal tissue consistent with normal histological organization. In the sections, the adrenal gland cells were largely belonging to the zona fascicula and zona reticularis parts of the cortex and there were no significant nuclear atypia, pleomorphism or increased mitosis. The patient who was asymptomatic and had normal adrenal function in postoperative laboratory analyses did not undergo any additional intervention or further examination.

**Conclusion:** Adrenal tissue arises from two different embryological origins, the cortex from the mesoderm and the medulla from the ectoderm. The adrenal cortex develops from the mesodermal dorsal cells in the 4th-5th gestational weeks. Interstitial cells of the testis and theca cells of the ovary develop from the ventral cells of the same region. The transposition of the cortex tissue during the migration and descending of the gonads and mechanical separation during the early embryological period are accepted to be effective in the formation of adrenal residues. While some adrenal heterotopic tissues remain in the adrenal tissue area in the neighborhood of the kidney, others can migrate with the gonads' descending to the pelvis and scrotum. Some authors predict that these residues may be present in 50% of newborns, but most of them undergo atrophy in adulthood. In adults, the incidence of ectopic adrenal tissue in the spermatic cord is less than 1%. Tumor development from ectopic adrenal has rarely been reported.

Ectopic adrenal tissue is a rare condition encountered in inguinal hernia surgery. For surgeons interested in hernia surgery, the possibility of ectopic adrenal tissue should be kept in mind when yellow-orange nodular structures are encountered around the hernia sac. It is suggested that this nodule should be excised and histologically examined considering its hormone production and malignancy transformation.

**Keywords:** Ectopic adrenal tissue, inguinal hernia, spermatic cord

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## PP-0173 [Endocrine Surgery]

# An Interesting Surrenal Adenoma Case: Was It Pheochromocytoma?

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**Introduction:** Pheochromocytomas are neoplasias originating from the chromaffin cells of the sympathoadrenal system. The most commonly used biochemical parameters for diagnosing pheochromocytoma, which can be symptomatic due to irregular, episodic and excessive catecholamine release, are the blood/urine catecholamine and catecholamine degradation products. These tests have high sensitivity and specificity. The main problem is that the patient gives symptoms of pheochromocytoma causing morbidity/mortality during adrenal surgeries or other surgeries despite negative biochemical tests. The purpose of presenting this case is to raise awareness about this interesting aspect of pheochromocytoma.

**Case:** A 22-year-old female patient was admitted to our clinic with the complaints of pain and swelling in the right flank area. The patient had no complaints such as nausea, vomiting, and dysuria. She did not have any features in her history. The 24-hour urine metanephrine level, which was measured in an external center, was 79 mcg/day and the normetanephrine level was 216 mcg/day. Other laboratory parameters were normal. Twenty four-hour Holter monitoring was applied to the patient and the mean blood pressure of the patient was measured as 130/77 mm Hg. The contrast-enhanced abdominal computed tomography of the patient revealed a 40 \* 35 mm lesion in the right surrenal lodge. In the PET CT, a lesion with a SUV max of 15.7 was observed in the right surrenal area. Moreover, lesions in the axial sections passing through L2 and L3 levels, which may be metastasis with high SUV max value, were viewed. The patient was evaluated as nonfunctioning surrenal adenoma/adenocarcinoma and preoperative surgical preparation was performed for the patient. Pheochromocytoma was not considered for the patient who was consulted to the endocrinology department preoperatively. All surgical preparations of the patient were completed. During anesthesia induction, her blood pressure level increased to the levels which could not be controlled (300/200 mm Hg). Therefore, patient's surgery was abandoned and the patient was extubated after about 1-hour blood pressure regulation and stabilization on the operating table. The patient was taken to the postoperative area of the operating room for follow-up. The patient suffering from respiratory distress during her follow-up was re-intubated and taken into the anesthesia intensive care unit for follow-up. In the examination of the patient performed in the anesthesia intensive care unit, intense crepitant rales were

observed in the bilateral lung bases. In deep tracheal aspiration, abundant amount of foamy fluid secretion was aspirated. The patient was primarily considered to have hypertensive pulmonary edema. During the intensive care follow-ups, the patient had cardiopulmonary arrest several hours later. The patient, who did not respond to routine cardiopulmonary resuscitation, died.

**Conclusion:** It should never be forgotten that pheochromocytoma is an important disease of the sympathoadrenal system, which can easily be diagnosed by biochemical tests with high sensitivity/specificity, but can be difficult to deal with because it causes high morbidity/mortality due to missed/undiagnosed cases.

**Keywords:** Pheochromocytoma, surrenal adenoma, metanephrine, normetanephrine, hypertension

## PP-0174 [Endocrine Surgery]

# The Success of Preoperative Imaging Methods in the Treatment of Hyperparathyroidism and Our Postoperative Results

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**Objective:** It was aimed to evaluate the early results of patients who underwent surgical treatment for hyperparathyroidism.

**Material and Methods:** The data of the patients, who were operated by a single surgeon for hyperparathyroidism between May 2014 and June 2017, on their demographic features, underlying diseases, preoperative imaging methods, and the efficiency of surgical treatment performed with localization were evaluated retrospectively. In the study, comorbid diseases, histopathological examination results, postoperative complications, and biochemical parameters were also investigated.

**Results:** Of 14 patients, 9 were female (64.2%) and 5 were male (35.7%). The mean age was 56.6 (range, 22-73) years. All patients were performed thyroid/neck ultrasonography (USG) and those with thyroid nodule were applied preoperative fine needle aspiration biopsy (n=3, % 21.4). The success of USG in detecting the parathyroid lesion was 71.4%. Parathyroid scintigraphy was performed in all patients (100%). While the localization data of two patients were found to be wrong (14.2%), the false negative rate (n=4) was found as 28.5%. The usage rates of the computed tomography (CT) and magnetic resonance (MR) of the neck were 17.2% and 28.5%, respectively. While the mean serum Ca value was 11.9 mg/dL (range, 10.6-18.2) in the preoperative period, it decreased to 8.8 mg/dL (range, 7.1-10.1) in the postoperative 26-month follow-up (range, 6-44). Frozen section results were expected in all patients. The PTH kit was technically used in only 3 patients and the operation was terminated after confirmation by any of these methods. As a primary pathology, adenoma was detected in most of the patients (n=12, 85.7%). The exploration of the neck did not reveal multiple adenomas. The involvement was mostly observed in the right lower parathyroid gland (n=6, 50%), followed by the left lower parathyroid gland (n=4, 33%) and right and left parathyroid glands (n=1, 8.3%). The most important surgical indication except for adenomas was the successful renal transplantation patients (n=2, 14.2%) who developed tertiary hyperparathyroidism. While one of these patients underwent 3.5 parathyroidectomy, the other patient was performed total (4) parathyroidectomy and autotransplantation to the arm. The most common comorbid diseases were hypertension (57.1%), diabetes (42.8%), and thyroid disease (28.5). Unilateral thyroidectomy was added to 2 cases and bilateral thyroidectomy was added to 1 case. In the histopathological examinations, the mean diameter of adenomas was 1.4 cm (range, 0.5-4). In the postoperative period, transient unilateral vocal cord paralysis was observed in 1 patient and subcutaneous hematoma was observed in 2 patients. Persistent hyperparathyroidism, recurrence, permanent hypoparathyroidism, and mortality were not observed.

**Conclusion:** The effective treatment method for hyperparathyroidism is surgery, which can be performed by specialized surgeons with high success and low recurrence rates. While the importance of localization studies with preoperative noninvasive imaging methods is generally accepted for surgical success, the inadequacies in the detection of small lesions and multiple/extra glands reveals the importance of intraoperative exploration.

**Keywords:** Hyperparathyroidism, imaging techniques, surgery

## PP-0175 [Endocrine Surgery]

# Incidence of Papillary Microcarcinoma in Patients Undergoing Total Thyroidectomy for Benign Thyroid Disease

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**Objective:** Increasing use of thyroid ultrasound and other cervical imaging techniques in recent years has led to the detection of even very small nodules and the more frequent recognition of papillary thyroid cancers smaller than 1 cm, which are defined as microcarcinoma. Papillary thyroid microcarcinomas (PTMC) are also frequently confronted in surgeries performed for benign thyroid diseases. Our aim in this study is to share our experience on patients operated due to benign thyroid disease, whose pathological evaluation was incidentally reported as PTMC.

**Material and Methods:** The files of 201 patients performed total thyroidectomy due to benign thyroid disease (toxic nodular goiter, benign cytology, 4 cm or larger nodules, etc.) by a single surgeon in Ümraniye Training and Research Hospital General Surgery Department between May 2014 and November 2017 were retrospectively evaluated. Before surgery, all patients had benign cytology in their fine needle aspiration biopsy (FNAB) and they were performed total thyroidectomy in accordance with the algorithm of our clinic. The demographic data, pathological findings, treatments, and results of the patients were evaluated. The patients diagnosed with preoperative thyroid cancer were excluded from the study.

**Results:** The mean age of the patients was 46 (range, 17-78) years and 159 of them (79.1%) were female. Twenty-five patients (12.4%), who had been incidentally diagnosed with PTMC after thyroid surgery due to possible benign thyroid disease, were evaluated. The mean diameter of PTMC was 4.7 + 2.4 mm. In six patients (6/25, 24%), the tumor was multifocal and in half of them, tumor focus was in both lobes. In one patient, the tumor was infiltrated into the thyroid capsule. Interestingly, in two patients (2/201, 1%), macrotumor/papillary thyroid carcinoma (mean diameter 1.6 + 0.3 cm) was also detected. None of the patients in our series needed complementary thyroidectomy. All patients were given suppression therapy and were directed to the nuclear medicine department for probable adjuvant radioiodine therapy. The mean duration of follow-up was 2.6 years (range, 4-44 months). All of the patients were healthy and their diseases did not recur.

**Conclusion:** It cannot be said that PTMC is an incidental entity that is rarely seen in patients operated for benign thyroid disease. The possibility of incidental PTMC should be kept in mind in the treatment of nodular thyroid disease and the advantage of total thyroidectomy should be remembered at least in selected patient groups.

This study was presented as a poster in the Uludağ ENT Days Symposium on March 2-4, 2018.

**Keywords:** Papillary thyroid carcinoma, microcarcinoma, incidental, total thyroidectomy, benign thyroid diseases

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## PP-0176 [Endocrine Surgery]

# Amyloid Goiter Presenting with Amyloid Deposition in the Parathyroid Gland

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**Introduction:** It was aimed to present a case with compression symptoms associated with amyloid deposition in the thyroid due to chronic renal failure and parathyroid adenoma-like parathyroid amyloidosis. It was also recalled that it could be confused with medullary thyroid carcinoma in the intraoperative frozen section analysis of the parathyroid gland due to amyloid deposition.

**Case:** A 41-year-old male patient, who was followed up for ankylosing spondylitis and hemodialysis for chronic kidney failure, presented with the complaints of swelling on the neck, shortness of breath, and difficulty in swallowing. His thyroid ultrasonography revealed multiple nodules in both lobes, the largest of which was 40x25 mm in the middle area of the left lobe. The right lobe of the thyroid gland was 90x60x46 mm, the left lobe was 75x40x30 mm, and the thickness of the isthmus was 16.5 mm. An approximately 1.5 cm lesion, which was suspected to be parathyroid adenoma, in the neighborhood of the right lower lobe of the thyroid was included in the total thyroidectomy specimen. The patient was discharged on the 2nd postoperative day without any complication after the operation. On the pathological examination of the thyroid gland, which was 195 g in weight, the right lobe (R) was 10x5x5,5 cm, the left lobe (L) was 6,5x3,5x4 cm, the isthmus (I) was 3x2x1,5 cm. There was a solid nodule locally including cystic areas, the largest of which was 4.2x4.5x2.5 cm, and filling the lobe and the isthmus in the right lobe sections. In the left lobe section, a 6,5x3,5x4 cm solid nodule filling the whole left lobe, having multinodular appearance, and including hemorrhagic and colloid areas in the middle was viewed. In the histochemical examination, there were TTF1 (-), Chromogranin (+), and M-CEA (-) in the RB9 coded block (the area thought to be parathyroid) and tile red staining with Congo-red was observed in the RA4 and RA6 coded blocks. In the polarized light, the material radiating the color of apple green was seen. The pathological diagnosis was reported as amyloid goiter and parathyroid tissue showing amyloid deposition.

**Conclusion:** Although amyloid depositions are relatively common in the thyroid gland, growth of the thyroid gland secondary to the amyloid deposition is a rarely encountered condition. Amyloid deposition in the thyroid gland can be seen in rheumatoid arthritis, anky-

losing spondylitis, familial Mediterranean fever, as well as in medullary thyroid cancer at the rate of 50-70%. Amyloid goiter may appear as the first finding of systemic amyloidosis, although rare. Although fine needle aspiration biopsy is recommended for the diagnosis of amyloid goiter, it can be inadequate for the differential diagnosis of medullary thyroid carcinoma. In literature, the cases with amyloid goiter seen have been admitted with the symptoms of compression as in our case. The microscopic aggregation of amyloid fibrils in the thyroid gland in the systemic amyloidosis is seen at a rate of 50-80%, but in the literature, the aggregations in the parathyroid gland are rarely reported. Amyloid accumulation in the parathyroid gland, which is rarely reported in the literature, may accompany to the amyloid accumulation in the thyroid gland and it should be remembered that the parathyroid gland with amyloid deposition may be confused with medullary thyroid carcinoma in the intraoperative frozen section analysis.

**Keywords:** Amyloid parathyroid, goiter, amyloidosis, amyloid goiter

## PP-0177 [Endocrine Surgery]

# The Effect of Hyaluronic Acid Carboxymethyl Cellulose on the Prevention of Postoperative Adhesion in Radiotherapy Added Thyroid Surgery

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**Objective:** The application of radiotherapy after thyroid surgery increases the adherence in the operation site and causes complications to increase in later interventions. Studies on the effect of hyaluronic acid carboxymethyl cellulose (Septrafilm®) on intraabdominal adhesions have been conducted and its positive effects have been shown. In this study, the effect of Septrafilm® on the development of adhesion after thyroid surgery with radiotherapy was examined.

**Material and Methods:** The study was carried out at the Istanbul University Cerrahpaşa Medical Faculty, Experimental Animals Production and Research Laboratory with permission from the ethics committee of Istanbul University. In our study, 200-250 g and 4-5-month-old female Sprague Dawley rats were used. Four groups including 10 rats were formed for the study. A group was given Septrafilm® and radiotherapy, B group was given radiotherapy, C group was given Septrafilm®, and D group was identified as the control group. In all rats, dissection to the thyroid lodge was performed. Septrafilm® was placed into the thyroid lodge in groups A and C. After 30 days, 2 Gray/day radiotherapy was applied to the neck region in A and B groups for 5 days. The rats, which were followed for 90 days after radiotherapy, were sacrificed and the severity of adhesions in the thyroid lodge was macroscopically evaluated as 0-1-2. In addition, the tissue samples were examined histopathologically. In the histopathological examination, histiocytes, fibroblast, fibrosis, collagen, vascularization, granulocyte, giant cell, and fat necrosis were evaluated and graded as 0-1-2-3. The results were statistically evaluated through the Chi-square test and the value of  $p < 0.05$  was considered to be significant.

**Results:** During anesthesia administration for radiotherapy, two rats from groups A and B died. No severe adhesion was observed in group A, but more severe adhesion was seen in group B given only radiotherapy. The  $p$  value was found to be 0,047, which was significant. The macroscopic features of the groups were not significantly different when compared to each other. In the comparison of the results of histopathological examination, a statistically significant result could not be obtained.

**Conclusion:** Post-operative adhesions are an important cause of morbidity. Radiotherapy applied after surgery increases the fibrosis and also the adhesions. This situation further increases the morbidity of the procedures applied for recurrences developing after cancer surgery. Laryngeal nerve damage and hypoparathyroidism are the most important complications in cases of the need for re-intervention after thyroid surgery. The most important factors in the development of these complications are dissection difficulties due to adhesions and invasion of the recurrent mass. Although many methods, drug and anti-adhesion barriers have been used for post-operative adhesions, no ideal method has been found. Septrafilm®, which is mostly used intra-abdominally to prevent adhesions, was used in the thyroid lodge in our study and its effectiveness with radiotherapy was assessed. The results were not found to be significant due to the a few number of subjects and the short duration of waiting.

**Keywords:** Radiotherapy, thyroid surgery, postoperative adhesion

## PP-0178 [Endocrine Surgery]

# Maxillary Brown Tumor Associated with Parathyroid Carcinoma

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Brown tumors are osteolytic bone lesions arising as a result of persistent hyperparathyroidism. They are usually recognized late in the natural development of the disease and they are still very rare due to the earlier diagnosis of primary hyperparathyroidism. We presented a 51-year-old male patient with a history of maxillary abscess recurring for two months. An osteolytic bone lesion was seen in the maxillary alveolar process in the computed tomography. Biopsy was performed and the histopathological result was consistent with a Brown tumor. The aforementioned localization is rare for such tumors and therefore, a difficulty occurred in the primary diagnosis. However, in this case, the association with primary hyperparathyroidism was a clue to the diagnosis, and there was a significant change in the patient's complaints after parathyroidectomy. A case of Brown tumor secondary to parathyroid carcinoma has been rarely reported. As we know, this is one of a few Brown tumors that have been identified in these localizations and the first case occurring secondary to parathyroid carcinoma.

**Keywords:** Parathyroid carcinoma, maxillary brown tumor, parathyroidectomy

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## PP-0179 [Endocrine Surgery]

# Our Rates of Recurrent Laryngeal Nerve (RLN) Damage after Total Thyroidectomy

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**Objective:** It was aimed to determine and clinically evaluate the RLN damage rates in patients undergoing total thyroidectomy.

**Material and Methods:** The files of 260 patients, who were performed total thyroidectomy by a single surgeon for benign (toxic nodular goiter, nodules with benign cytology and size of 4 cm or larger) and malignant (papillary thyroid cancer) thyroid disease in the Department of General Surgery at the Health Sciences University, Ümraniye Training and Research Hospital between May 2014 and January 2018 were retrospectively evaluated. All patients underwent the neuromonitorization of both cords (nim response 3 version, Medtronic, USA). All cases suspected to have vocal cord paralysis were examined by an ENT specialist. Demographic data, underlying etiologic diseases and the efficacy of surgical treatment were evaluated. The data were collected in an Excel file and the obtained results were presented in number (n) and percentage (%).

**Results:** The diagnosis of vocal cord paralysis was established by the ENT department in 12 patients (4.6%) with respiratory distress and low voice volume and/or quality in the postoperative period. Eight patients had unilateral paresis (n=8/260, 3%) (Right RLN 50%, Left RLN 50%) and 4 patients (n=4/260, 1.5%) had bilateral (BRLN) paresis. Nine of the patients (75%) were female and 3 were male (25%). These patients were initiated steroid therapy. The mean age of patients with RLN paralysis was 51 (range, 32-67) years and the mean duration of follow-up was 23 months (range, 1-43). The mean duration of hospital stay was 4 days (2-14). When the pathology reports were examined, papillary carcinoma (58%) was detected in 7 patients, parathyroid adenoma (8%) in 1 patient, and multinodular goiter (34%) in the ground of thyroiditis in 4 patients. Of the patients with BRLN paralysis, a 57-year-old female patient with multiple foci papillary cancer pathology developed respiratory distress on the postoperative 2nd day and she was performed tracheotomy under emergency conditions (n=1, % 0.3). In this patient, the left RLS became active in the 4th month and radioactive iodine treatment was initiated after closing the tracheostomy. One of the other patients with BRLN paralysis was applied left thyroplasty in the first postoperative month and the other was applied lateralization with suture. Five patients with unilateral paralysis and one patient with BRLN paralysis were found to have vocal cord mobility in the 6th month in the ENT control (temporary paresis, n=6/260 % 2.3). It was observed that these patients did not develop any significant morbidity and their voice quality improved. A patient with permanent left RLN damage was applied fat injection in the first postoperative year, and a patient with right arytenoid subluxation (intubation crush injury) was performed reduction.

**Conclusion:** To reveal and preserve RLN with careful dissection and intraoperative nerve monitoring in cases undergoing total thyroidectomy is the surgical technique that should be preferred. Moreover, in the occurrence of RLN injuries despite any surgical attention, close follow-up and cooperation with patient are essential for minimizing morbidity.

**Keywords:** Total thyroidectomy, recurrent laryngeal nerve (RLN) damage, neuromonitorization, vocal cord

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## PP-0180 [Endocrine Surgery]

# Ectopic Parathyroid Adenoma with Mediastinal Localization: Video-Thoracoscopic Parathyroidectomy

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While parathyroid adenoma is the most common cause of primary hyperparathyroidism with the rate of 80% -85%, 5-10% of these adenomas have ectopic localization. Ectopic parathyroid adenomas are located in the thymus in 95% of cases, but about 5% are mediastinal. In this report, we aimed to present videoendoscopic excision of parathyroid adenoma detected in the anterior mediastinal location in a 40- year-old female patient. When routine laboratory analyses demonstrated hypercalcemia, advanced techniques were performed and primary hyperparathyroidism was detected. In the Tc-99m MIBI scintigraphy, an appearance consistent with parathyroid adenoma was observed out of the neck region. The computed tomography revealed that the mass was located in the anterior mediastinum, but distinct from the thymus tissue. The parathyroid adenoma, which was preoperatively localized with videoendoscopic minimally invasive approach with 2 trocars from the right hemithorax, was found and excised. The excision of the adenoma was confirmed by postoperative laboratory and histopathological analyses.

Surgical excision in parathyroid adenomas is still the most effective treatment option. Surgical success depends primarily on the correct localization of the adenoma in the preoperative period. With the use of current video-endoscopic minimally invasive technologies, we think that these patients can be protected from additional morbidities that can be caused by classical surgical methods.

**Keywords:** Primary hyperparathyroidism, ectopic parathyroid adenoma, video-endoscopic surgery, minimal invasive surgery

## PP-0181 [Endocrine Surgery]

# Squamous Cell Carcinoma Originating from Sternotomy Scar and Displaying Thyroid Invasion: Case Report

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Skin cancers are very common across the World. The most common type of them is squamous cell carcinoma. Squamous cell carcinoma is seen at a high rate in chronic scar tissues, which are defined as Marjolin ulcer. In this study, we presented a case of squamous cell carcinoma associated with an incision scar and displaying a thyroid invasion.

**Keywords:** Squamous cell carcinoma, thyroid, scar, Marjolin ulcer

## PP-0182 [Endocrine Surgery]

# Insulinoma in the Left Lower Quadrant

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**Introduction:** Insulinoma is a rare benign tumor with an incidence of 1 to 4 per a million. They are pancreatic tumors arising from the  $\beta$ -cells of Langerhans islets. They are often originated from the pancreas. In very rare cases, it is known to arise from the spleen, perisplenic tissues, hepaticoduodenal ligament and treitz ligament, and ectopic pancreatic tissues. Insulinomas constitute the majority of neuroendocrine tumors (60%). In endocrine tumors, the distinction of benign and malignancy, being hormonally active, the relationship with multiple endocrine neoplasia 1 (MEN-1) are important for prognosis. The malignancy rate of insulinomas is around 10%. In these cases, typical Whipple's triad is seen (the presence of hypoglycemia symptoms, blood sugar level lower than 50 mg/dl, and regression of symptoms with glucose intake). Because of the hormonal effects of endocrine tumors, and the risk of malignancy, surgical intervention should be considered in the first place. Medical treatment is planned in cases for which surgical resection is not possible.

**Case:** A 68-year-old female patient in our present case was admitted to our hospital with the complaints of fainting when hungry and trembling in the hands and feet that began 2 years ago. It was learned from the anamnesis of the patient that she had applied to the an external center for these complaints and she had been initiated phenytoin 100 mg tb 1x1 with the pre-diagnosis of epilepsy. However, with the use of phenytoin, it was learned that the complaints had not regressed. Apart from that, she did not have any comorbid disease. In the blood analysis, her blood glucose level was found to be 45 g/dL (70-110 g/dL) and other biochemical parameters and hemogram parameters were evaluated as normal. Because the blood glucose level was low, the patient was thought to have insulinoma. Fasting insulin level was measured as 113.6 uU/ml (2.6-24.9 uU/ml) and C peptide was 10.81 ng/ml (1.1-4.4 ng/ml). Since the anterior pituitary hormones, which were evaluated with the suspicion of MEN-1, were at normal levels, MEN-1 was ruled out. In the result of Ga-68 Dotatate PET CT and the whole abdominal CT performed for the pur-

pose of advanced examination, an active mass was detected in the left lower quadrant and the patient was taken into operation. The histopathological examination result was reported as 'insulinoma', which was presented with imaging techniques.

**Conclusion:** Insulinoma is a pathology that require the clinicians to be in constant alarm in terms of both symptoms and localization. The diagnosis of insulinoma with symptoms for which inadequate imaging methods are used and ectopic localization areas should be kept in mind. In this case report, we aimed to contribute to the literature and to include this region in the ectopic areas by presenting a case of left lower quadrant ectopic insulinoma, which is encountered in very few cases.

**Keywords:** Insulinoma, atypical, pancreas

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## PP-0183 [Endocrine Surgery]

# Ganglioneuroma in Adult Patient

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**Introduction:** Ganglioneuroma is a neurogenic tumor like neuroblastoma and ganglioneuroblastoma, originating from the common primitive cells of neural crest. It is a benign tumor frequently consisting of sympathetic ganglion cells. It rarely originates from the adrenal medulla, sympathetic and peripheral nerves. It is more frequently seen in the posterior mediastinum and then retroperitoneum. Less than 30% of ganglioneuromas occur in the surrenal region. Because the tumor is not metabolically active, it is usually asymptomatic and it is rarely detected before reaching large sizes. The treatment of ganglioneuroma is its surgical removal.

**Case:** Our case was a 47-year-old female patient. Because of the detection of right surrenal mass in the abdominal ultrasonography performed in an external center, she was referred to our clinic. The patient was examined in our clinic for the existing surrenal mass. She had no history of a known disease. No abnormality was found in her familial history. There was no active pathology in the physical examination. Laboratory findings showed that the present tumor did not have an endocrinological component. The tumor marker values were normal. The abdominal ultrasonography revealed 3 cm hypodense lesion in the right adrenal gland. In the surrenal computed tomography performed for advanced examination, a 30 x 18 mm space-occupying nodular formation was observed in the localization of the right adrenal gland. The patient was followed up for surrenal mass. The patient was also consulted to the endocrinology department and the mass was accepted to be non-functional according to the results of examinations. After 6 months, surrenal CT was repeated. In CT, a 36 x 21 mm space-occupying nodular formation was observed in the right surrenal gland. As a result of the present imaging techniques, operation was planned for progressed adrenal mass. The patient was performed right surrenalectomy. No complications developed during and after the operation. The right surrenalectomy material was evaluated. S100 positive, calretinin and ganglion cells were observed. Chromogranin, Synaptophysin and CD34 were evaluated as negative. The findings were reported to be consistent with ganglioneuroma. Ganglioneuroma is a tumor originating from the neural crest and developing from neuroectodermal cells. It can develop along the sympathetic chain extending to the base of the head, neck, posterior mediastinum, retroperitoneum and adrenal gland. It is frequently seen in the posterior mediastinum and retroperitoneum. Adrenal gland is involved at the rate of 21%. It is often diagnosed in childhood. Two-thirds of the cases are under the age of 20 years. In our case, the patient's age was 47 years. It may develop as a spontaneous tumor or as a maturation or metastasis of the neuroblastoma after chemotherapy or radiotherapy. It is a usually benign, slowly-growing, and asymptomatic rare tumor. Although rare, hypokalemia, hypertension, masculinisation, and diarrhea in association with vasoactive intestinal polypeptide that they secrete can be seen. Thanks to the accessibility of imaging techniques nowadays, the detection of ganglioneuromas has increased. However, these masses are difficult to diagnose preoperatively because they are similar to other tumors radiologically. The pathway to follow in the treatment of incidental adrenal masses depends on many factors. Hormonally active tumors must be removed surgically regardless of their size. Tumors smaller than 4 cm and hormonally inactive should be followed and surgery should be planned in the presence of progression. There is no clear approach for asymptomatic adrenal masses with the size of 4-6 cm. Surgery should be recommended only for adrenal masses larger than 6 cm. In our case, the tumor was non-functional and displayed progression within 6 months. The first treatment option for adrenal ganglioneuromas is surgery.

**Keywords:** Ganglionöroma, benign, pankreas

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## PP-0184 [Endocrine Surgery]

# Laparoscopic Adrenal Surgery: Five-year Results in Bakırköy Dr. Sadi Konuk Training and Research Hospital

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**Objective:** In this study, we aimed to share the results of the cases of adrenal surgery performed after beginning to provide the branch service.

**Material and Methods:** Demographics, biochemistry, imaging, outpatient clinic, surgery, and histopathology data of all cases undergoing minimally invasive surgery between June 2012 and December 2017 were analyzed retrospectively.

**Results:** A total of 102 patients were included in the study. The median age of the patients was 52 (27-79) years and the F/M ratio was 83/19. It was seen that the number of operated patients increased with years. Of the detected lesions, 50% (n=51) were non-functioning adenomas, 22.5% (n=23) were Cushing's disease, 18.6% (n=19) were pheochromocytoma, and 6.9% (n=7) were Conn Syndrome. One patient had Carney Complex, and another had von Hippel-Lindau Syndrome. The mean preoperative tumor size was 49,224.2 mm in the imaging techniques. The most frequently used imaging method was MR (72.5%, n=74). The rate of conversion to open surgery was 4.9% (n=5). Open surgery for repair was performed due to the oncologic causes in 3 cases, unsafe surgical site in one case, and renal venous injury in one case. In one patient, a pancreatic capsule injury developed during left adrenalectomy and the operation was completed laparoscopically. This patient was conservatively followed after surgery. The mean duration of surgery, including patient positioning after intubation, was 143,752.3 minutes. Histopathological examination revealed adrenocortical carcinoma in 3,9% of patients (n=4). Metastases were detected in two patients (1.9%). In cases with adrenocortical carcinoma, the mean tumor size was 98.013.9 mm, which was significantly larger than in those not having tumor (p<0.001). The mean duration of hospital stay was 3,10,8 days. There was no mortality in our series during the 30-day post-operative period and subsequent follow-ups.

**Conclusion:** With increasing volume of the cases in our clinic, laparoscopic surgery can be safely applied for adrenal gland pathologies and larger sized masses can be safely removed with minimally invasive technique with increased experience in accordance with the literature.

**Keywords:** Adrenal gland diseases, functional adrenal masses, laparoscopic surgery

## PP-0185 [Endocrine Surgery]

# Cases of Pheochromocytoma: Examination of 8-year Results

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**Objective:** It was aimed to examine the results of cases who were planned to be operated by the Multidisciplinary Endocrinology Council due to the pre-diagnosis of pheochromocytoma in our clinic.

**Material and Methods:** The demographics, biochemistry, imaging, outpatient clinic, surgery and histopathology data of all cases undergoing surgery due to the pre-diagnosis of pheochromocytoma between January 2010 and January 2018 were analyzed retrospectively.

**Results:** Totally 28 patients were included in the study. Their median age was 54,5 (31 – 83) years and the F/M ratio 20/8. Of the patients, 75% (n=21) had hypertension (HT) and 6 patients used HT medications more than one. The mean age of HT disease was 19.7±9.2 years in patients. All of the patients were operated with a pheochromocytoma protocol after a minimum 3-week use of alpha-blocker. They were routinely hospitalized one night before the surgery and applied IV hydration and DVT prophylaxis. The mean mass size on imaging was 48.9±18.6 cm.

Of the patients, 89.3% (n=25) were operated laparoscopically and 10.7% (n=3) were operated with robotic approach. The rate of conversion to open surgery was 3.5% (n=1). In the peroperative period, atrial fibrillation occurred in one patient and ventricular tachycardia in another patient. Postoperatively, 89.3% (n=25) of the patients were monitored in the intermediate intensive care unit in the operating room overnight. In the postoperative period, alpha blockers were discontinued in all patients. In the 28.5% (n=8) of the patients, the antihypertensive need was totally disappeared.

The mean duration of operation was  $118.6 \pm 50.2$  minutes as of the first trocar insertion. On average, the time for reaching the adrenal vein was  $44.1 \pm 4.8$  minutes. Adrenal vein was not closed with Hem-o-lok clip in 67.8% (n=19) and with metallic clip in 32.2% (n=9). None of the cases was closed only with vascular sealing device. In the result of histopathological examination, the PASS score was above 8 in two cases. These two cases did not show local recurrence or infiltrative-metastatic features in their follow-ups. Paraganglioma was detected in the sections of another mass excised from the retroperitoneum in the case converted to open surgery. Pheochromocytoma and ganglioneuroma were seen as fusion in the sections of another mass. The mean duration of hospital stay was  $3.1 \pm 1.7$  days. One patient developed a hernia in the trocar site, and then the hernia was operated for repair.

**Conclusion:** Pheochromocytoma should be examined in detail radiologically and endocrinologically before surgery and should be prepared for surgery. Both preoperative and peroperative hypertension control are ultimately important. The clamping of the adrenal vein should primarily be paid attention and it should be kept in mind that malignant cases may be encountered although rare.

Therefore, when performing minimally invasive surgery, the oncologic principles should be considered.

**Keywords:** Pheochromocytoma, functional adrenal tumors, laparoscopic surgery

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## PP-0186 [Endocrine Surgery]

# Preoperative Parathyroid Adenoma Localization with Ultrasound-Guided Percutaneous Injection of Blue Dye

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The placement of the parathyroid glands can occur at different localizations depending on the embryological migration. Particularly in primary hyperparathyroidism patients, for whom clear information about the localization site cannot be obtained with the scintigraphy, minimally invasive methods have been begun to be used recently because of the high morbidity and worse cosmetic results of conventional neck region dissection for the detection of pathological gland. However, accurate localization is very important for detecting the target parathyroid gland in preoperative period and excising it with minimally invasive methods. For this purpose, many methods have been developed and continued to be developed. Despite all this, the detection of the correct localization still preserves its difficulty in some cases. The same method in every case does not give the same result. The choice of the appropriate method for each case is important, and maximum effort should be made for preoperative correct localization.

In this report, we present a method for preoperative localization of the right inferior parathyroid adenoma, the localization of which could not be clearly performed with Tc-99m MIBI study but could be visualized with the ultrasound of the neck for the target. A 47-year-old female patient had a sonographic parathyroid gland, which was consistent with an adenoma that was visualized with ultrasound, and it was percutaneously marked with Patent Blue dye. For the current localization, the lodge was entered with a 2.5 cm incision over the marking carried out with a pencil on the skin and it was seen that the gland was partially stained with the blue dye and visually separated from the surrounding tissues. The PTH value, which was 139 preoperatively, was decreased to 31 at the measurement at the 10th minute after the excision of the gland. And, the histopathological examination confirmed the parathyroid adenoma. The postoperative period of the patient with no drainage was normal.

The method that we presented can be a practical and inexpensive preoperative localization choice that can be used in appropriate cases for minimally invasive parathyroid surgery.

**Keywords:** Primary hyperparathyroidism, parathyroid adenoma, patent blue, ultrasound-guided marking

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## PP-0187 [Endocrine Surgery]

# Did the King Suppiluliuma have Graves ophthalmopathy associated with hyperthyroidism in the 9th century BC?

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**Introduction:** Graves orbitopathy is an autoimmune process that affects the orbital tissues in patients with Graves' disease. Local inflammation leads to enlargement of the extraocular muscles and increased orbital fat, resulting in proptosis, diplopia, eyelid swelling and retraction. The incidence of Graves' disease is about 3 out of 100,000 people in men and 16 out of 100,000 people in women.

**Case:** The appearance of the eyes of the statue, which allegedly belongs to the King Suppiluliuma, at the Hatay Archeology Museum, is consistent with Graves orbitopathy; proptosis and live gaze are evident. The absence of eyelids on the statue may be due to eyelid retraction frequently seen in Graves' patients. In the information of the statue, it is written that, "This statue belonging to Suppiluliuma was found in the inner castle gate of Tayinat Mound on the left side of the road at the 20th kilometer of Antakya-Reyhanlı highway of Hatay Province. The Luvice hieroglyphic inscription on the back of the statue shows that this statue belongs to the King Suppiluliuma, ruling in Tayinat (ancient Kunulua) at the beginning of the 9th century BC, in Late Hittite Patina/Unqi kingdom.

**Conclusion:** While Graves orbitopathy is usually seen in Graves patients with hyperthyroidism, it can also occur in euthyroid patients without a history of thyroid gland disease or in hypothyroid patients with Hashimoto's thyroiditis. The severity of Graves orbitopathy can be determined through Hertel's exophthalmometer.

The findings indicate that Graves orbitopathy was seen in Anatolia in the 9th century BC.

**Keywords:** Graves, hyperthyroidism, King Suppiluliuma, orbitopathy

## PP-0188 [Endocrine Surgery]

# Robotic Adrenal Surgery: Cases of Bakırköy Dr. Sadi Konuk Training and Research Hospital

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**Objective:** We aimed to share the results of robotic surgeries performed for adrenal gland diseases in our clinic over the last six years.

**Material and Methods:** Demographic, biochemistry, imaging, outpatient clinic, surgery and histopathology data of all cases undergoing robotic adrenalectomy between December 2011 and December 2017 were obtained from the hospital recordings and evaluated retrospectively.

**Results:** A total of 17 patients were included in the study. The mean age of the patients was 50 (26 - 71) years and the F/M ratio was 13/4. In the preoperative functional evaluation of detected lesions, 23.5% (n=4) were found to be non-functional. The most common (58.8%) functional mass was Subclinical or overt Cushing Syndrome (n=10). The mean preoperative tumor size was 31.7±11.3 mm. While it was switched to laparoscopic surgery in one patient (5.8%), no open surgery was performed. In one patient (5.8%), diaphragm injury developed during right adrenalectomy, and it was repaired with robotic procedure. Ten patients (58.8%) were operated with the DaVinci Si platform and 7 (41.2%) were operated with the DaVinci Xi platform. The mean clamping time was 22.7±3.9 minutes. It was observed that docking in the DaVinci Xi platform was slightly faster (p=0.4). The mean operation time from the intubation of the patient was 170.8±21.7 minutes. Histopathologic examination revealed cortical adenoma in 82.3% (n=14) of the patients. The mean hospital stay was 3.6±2.1 days. There was no mortality in our series during the post-operative 30 days and subsequent follow-ups. The average cost for robotic adrenalectomy was 3776.1±1016.2 TL and this cost was higher than the standard package amount of 2403.7 TL determined for laparoscopic adrenalectomy.

**Conclusion:** In our clinic, robotic surgery can be safely applied for adrenal gland pathologies, and the docking and operation time has been reduced with increasing experience. However, the high cost is still the most fundamental problem.

**Keywords:** Adrenal gland diseases, robotic surgery, adrenalectomy

## PP-0189 [Endocrine Surgery]

# Peroperative Localization of Parathyroid Adenoma under the Guidance of Gamma Probe

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Good localization of parathyroid adenomas, the most common cause of primary hyperparathyroidism, before surgery is very important for avoiding unnecessary dissections that increase morbidity and for implementing minimally invasive surgical principles. Although many methods have been described for this purpose, Tc-99m MIBI scintigraphy is the most commonly used imaging tool in preoperative diagnosis and localization at present. The same method can also be used to mark the adenoma area on the skin. In our report, we present a patient with parathyroid adenoma excised by minimally invasive surgery using peroperative gamma probe, who was operated after calculating the late phase washout time after Tc-99m MIBI application in the nuclear medicine unit. A 65 year-old female patient with a diagnosis of primary hyperparathyroidism was taken into operation two hours after the application of Tc-99m MIBI. After making measurements in the neck region with the gamma hand probe prepared in sterile conditions, the parathyroid gland with left inferior location was localized. Minimally invasive dissection was initiated and gamma probe was used as a navigation tool during dissection. The gland that was thought to have a parathyroid adenoma was excised where the signal was maximum, the diagnosis was confirmed by a 10-minute PTH measurement and histopathologic examination. It was observed that there was a difference of about 2.5 cm between pre-operative scintigraphy-guided skin marking performed with lead money and localizations performed with gamma probe on the surgical site. In this application, it was seen that there might be localization difference between preoperative scintigraphic marking and peroperative gamma probe marking. The difference was thought to be resulted from the difference in the degree of maximum hyperextension during scintigraphy when patient is conscious and in the position given under general anesthesia, but this angulation difference could not be quantified because an objective measurement method could not be used. Although this difference can be overlooked in parathyroidectomies with classical Kocher's necklace incision, we believe that it will be significant for the minimization of dissection site in minimally invasive procedures and the use of gamma probe in appropriate cases will be useful in the detection of gland localization.

**Keywords:** Primary hyperparathyroidism, parathyroid adenoma, Tc-99m MIBI, gamma probe

## PP-0190 [Endocrine Surgery]

# The Comparison of Thunderbeat and Clamp-Tie Techniques in Thyroid Surgery

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**Objective:** In thyroid surgery, while clamp and tie technique is conventionally used for many years, new generation devices have begun to be used to shorten the duration of surgery and to reduce complications. One of these energy-based vessel closure and sealing devices is a system that acts with both ultrasonic and bipolar energy, called Thunderbeat (Olympus, Tokyo-Japan). It has been reported that this system is successful in veins of 7 mm or less. In this study, it was aimed to compare the use of classical clamp - tie method with the use of the new generation Thunderbeat device in thyroidectomy operations.

**Material and Methods:** Thirty-five patients who underwent total thyroidectomy due to benign or malignant thyroid pathologies between September 2017 and December 2017 were included in this study. While clamp-tie technique was used in 23 of these patients, Thunderbeat technique was used in 12 patients. The patients in both groups were compared by using Fisher's Exact test and Monte Carlo simulation in terms of the length of hospitalization, the duration of surgery, and the complications of bleeding, nerve damage, and hypocalcemia.

**Results:** While the patients in the clamp-tie group included 18 females and 5 males and the mean age of the patients was 40.5 (20-68) years, the Thunderbeat group consisted of 10 female and 3 male patients and their mean age was 42.9 (28-63) years. Groups were comparable in terms of their futures. The mean duration of operation under anesthesia was 154 minutes (90-180) in clamp-tie group, but decreased significantly in the Thunderbeat group to 127 minutes (85-140) on average (p: 0.18). The mean duration of postoperative hospitalization was 2.41 (2-4) days in the clamp-tie group and 2.39 (2-4) days in the Thunderbeat group. There was no difference between the groups with regard to durations of hospitalization (p: 0.8). While hematoma was observed in one patient in the clamp-tie group, there was no hematoma in the Thunderbeat group. Vocal fatigue in one patient and temporary hoarseness in 3 patients were detected in the clamp-tie group and vocal fatigue in 2 patients and temporary hoarseness in one patient were observed in the Thunderbeat group (p: 0.66). Postoperative calcium replacement was carried out in 11 patients (47.8%) in the first group and in 5 patients (41.7%) in the Thunderbeat group (p: 1.0). No patient had permanent hypocalcemia. No significant difference was found between the groups in terms of complications.

**Conclusion:** It has been understood that the implementation of this new technique significantly shortens the mean duration of surgery, although there is no significant difference in terms of hospital stay and complications with traditional clamp-tie technique. Thunderbeat can be considered as an effective and reliable device according to this first report related to its use in thyroid surgery. Achieving more precise results will only be possible if the number of further studies increases.

**Keywords:** Tie, clamp, Thunderbeat

## PP-0191 [Endocrine Surgery]

## Assessment of Clinicopathologic Factors of Patients Whose Fine Needle Aspiration Biopsy from Thyroid Nodules Were Reported as Follicular Lesion of Undetermined Significance

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**Objective:** The Bethesda classification is widely used in the evaluation of fine needle aspiration biopsy results in patients with thyroid nodules. There are 6 groups in this class. Atypia of undetermined significance/follicular lesions of undetermined significance are included in group 3 and they cannot be categorized as benign or malignant. Although atypia of undetermined significance and follicular lesions of undetermined significance are in the same group, they have different malignancy risks. The purpose of our study was to investigate the clinicopathologic features of patients whose results of fine needle aspiration biopsy taken from thyroid nodule were reported as follicular lesions of undetermined significance.

**Material and Methods:** The study included patients whose fine needle aspiration biopsies, which were performed for thyroid nodule, were reported as the follicular lesion of undetermined significance and operated in the Breast, Endocrine, and General Surgery clinic at Ankara Numune Training and Research Hospital between June 2013 and November 2016. Demographic, clinicopathologic and ultrasonographic findings of 29 patients were analyzed.

**Results:** All patients underwent total thyroidectomy surgery. In eight patients (27.6%), the pathology report was malignant. All malignant lesions were papillary thyroid cancer. Lymphovascular invasion, capsular invasion or lymphatic metastasis were not detected in any of the patients with papillary thyroid cancer. The mean nodular diameter was 28 mm in patients with papillary thyroid cancer. The detection of excess nodules in the ultrasonography performed after univariate analysis which was carried out for the evaluation of malignancy risk in clinicopathologic factors ( $p=0.027$ ) and the presence of nuclear indentation in fine needle aspiration biopsy were found to be factors that were significantly associated with malignancy.

**Conclusion:** In patients whose fine needle aspiration biopsy from the thyroid nodule is reported as follicular lesion of undetermined significance, the presence of nuclear indentation in the cytologic examination and the detection of excess nodules in the ultrasonography apparently increase the risk of malignancy. In these patients, surgery should be primarily considered while planning treatment.

**Keywords:** Thyroid, nodule, follicular lesion, undetermined significance

## PP-0192 [Endocrine Surgery]

## Anatomic Variations of Parathyroid Glands in Cases with Secondary Hyperparathyroidism

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**Introduction:** The most common known cause of secondary hyperparathyroidism is chronic renal failure, and the most frequently encountered pathology is hyperplasia, which involves all 4 glands. The most common cause of recurrent or persistent hyperparathyroidism is missed ectopic localization and number anomalies.

**Material and Methods:** This is a retrospective study on 45 hemodialysis patients with SHPT, undergoing parathyroidectomy between December 2014 and January 2018. The purpose of this study was to determine the anatomic location of parathyroid glands, the identification of migration routes and the patterns and frequency of anatomical abnormalities in cases of secondary hyperparathyroidism. The indications for surgery are based on the guidelines of KDIGO in 2009 regarding chronic kidney disease and mineral-bone diseases. Therefore, patients who could not maintain serum calcium level (8.4-10.2 mg/dL), phosphate level (2.5-4.6 mg/dL) and PTH (130-600 pg/mL) between two and nine times higher than normal in spite of maximum medical treatment were operated. The surgical procedure is total parathyroidectomy with thyrothymic ligament excision (TTHLX), without bilateral neck exploration and autotransplantation (TPTX). The anatomical positions of the upper and lower parathyroid glands are indicated in the literature. All parathyroid glands located outside these anatomic regions are clearly defined as ectopic. In our mapping of our own operations, we documented the localizations by numbering them.

Based on the anatomical view obtained during the operation, we have defined 3 regions in which the upper parathyroid glands are frequently detected. These are;

Region 1: The area under the point where the inferior thyroid artery enters the thyroid and it crosses the recurrent laryngeal sinus

Region 2: The region between the area where the superior thyroid artery penetrates to the thyroid gland and the intersection of the inferior thyroid artery and recurrent laryngeal nerve, towards the back of the thyroid.

Region 3: The region covering the area from where the superior thyroid artery penetrates to the parenchyma to the posterior part of the artery towards the cranial region.

Four regions were defined with regard to the localization of lower parathyroid glands. These are;

Region 1: Including the posterolateral gland, the region between the point where the inferior thyroidal vein penetrates into the thyroid gland and the point where the inferior thyroidal artery penetrates into the gland.

Region 2: By considering the area where the inferior thyroidal vein penetrates into the thyroid gland as the beginning, the region covering 1-1,5 cm inferior of this beginning point.

Region 3: Through the thyrothymic ligament

Region 4: The area between the carotid sheath and the esophagus towards the inferior of the lower pole of the thyroid gland

**Conclusion:** Our 36 patients had iPTH level at normal levels on the postoperative 1st day and the removed tissues were verified with pathological findings. In 9 of our patients, persistent hyperparathyroidism developed after the first operation. The most frequent localizations were region 2 for the upper glands and region 1 for the lower parathyroid glands. Locations may be seen in ectopic localizations due to defects in parathyroid embryogenesis and developmental stages, especially in secondary hyperparathyroidism. The low success rate of preoperative imaging methods increases the knowledge of surgical anatomy by two-times.

**Keywords:** Ectopia, chronic renal failure, secondary hyperparathyroidism

## PP-0193 [Endocrine Surgery]

# Surgery of Thyroid Diseases: An Analysis of 1444 Cases from a High-Volume Center

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**Objective:** In this study, it was aimed to share the results of the patients who were decided to undergo surgery for thyroid gland diseases and performed thyroid gland surgery in our clinic.

**Material and Methods:** Demographics data, the results of preoperative laboratory and imaging examinations, fine needle aspiration biopsy (FNAB) findings, surgical findings, complications, and histopathologic data were retrospectively evaluated in patients who underwent thyroid surgery in our hospital between January 2009 and December 2017.

**Results:** Of 1444 cases undergoing thyroid surgery, the median age was 47 (14-82) years, and the F/M ratio was 1164/280. The most frequent (66.7%) cases were multinodular goiter (MNG) (n=964) and 20.7% (n=200) of them were toxic MNG cases. 11.3% (n=109) of the nodules detected in ultrasonographic examination were subcentimetric. Fine needle aspiration biopsy (FNAB) was performed on 1232 patients. According to this, 122 patients were evaluated as Bethesda 6 (malignant) and 82 patients as Bethesda 5 (malignancy suspicion). All patients with Bethesda 3 to 6 were discussed at the Multidisciplinary Endocrinology Council (MEC) for the indications for surgery and for the surgery to be performed. According to years, the percentage of operations performed with malignancy pre-diagnosis increased from 2.9% to 19.6%. Bilateral total thyroidectomy was performed in 64.4% (n=931) of the operated patients. Functional lateral neck dissection was performed in 30 patients (14.7%) while ipsilateral or bilateral central neck dissection was performed in 37 (18.1%) of 204 cases operated for the pre-diagnosis of malignancy. Functional neck dissection was performed in the case of positive results of FNAB or thyroglobulin washout examinations performed on lymphadenopathy determined by ultrasonography. Intraoperative intermittent nerve monitoring was used for all of the patients who had been operated since 2013 (n=1024). While the bipolar sealing device was used for hemostasis in the operations performed until 2014 (n=558), the ultrasonic vessel closure device±ligation was used by 2014 (n=886). The rate of transient hypocalcemia was 12.1% (n=175) and the rate of permanent hypocalcemia was 1.2% (n=17). Temporary hoarseness rate was 2.2% (n=32), permanent hoarseness rate was 1.1% (n=16), and four cases required (0.2%) tracheostomy. In fourteen



cases, per-operative complication developed (0,9%). Histopathological evaluation revealed papillary carcinoma in 297 patients (20.5%), of which 73 were micropapillaries. Medullary carcinoma was detected in 13 patients (0.9%) and follicular carcinoma was found in 10 patients (0.6%). Postoperative management of all cases with malignant histopathological examination was carried out by MEC.

**Conclusion:** The rates of case volume and oncologic surgery have increased in our clinic according to years, and management of cases with malignant pre-diagnosis is performed by a multidisciplinary team. The rates of temporary and permanent complications after surgery are similar to those in the current literature.

**Keywords:** Thyroid gland surgery, total thyroidectomy, papillary thyroid cancer

## PP-0194 [Endocrine Surgery]

# Comparison of Giant and Other Parathyroid Adenomas

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**Objective:** Primary hyperparathyroidism (PHPT) is one of the most common endocrine disorders and its most common cause is adenomas. The size of the adenomas is quite variable. They rarely reach very large sizes and its clinical significance is unknown. The weight of the normal parathyroid gland is 50 to 70 mg and the median weight is 600 mg. Adenomas with a size over three centimeters (cm) are called giant adenomas. In this article, we aimed to investigate the clinical effects of adenoma size in patients with primary hyperparathyroidism.

**Material and Methods:** Between January 2007 and December 2016, 321 patients underwent parathyroidectomy due to primary hyperparathyroidism. More than one adenoma were found in 19 patients. These patients were excluded from the study. The adenomas with a size over 3 cm were accepted as giant adenomas. The patients were divided into two groups as those with non-giant adenomas (Group 1) and those with giant adenomas (Group 2). Two groups were compared in terms of age, sex, gland localization, pre- and postoperative laboratory data, the presence of bone diseases and kidney stones, and temporary and permanent hypocalcemia rates.

**Results:** A total of 302 patients, including 245 (81.4%) in Group 1 and 57 in Group 2, were included in the study and their mean age was  $55.1 \pm 22.4$  (19-80) years. A comparison of the demographic and laboratory data of the groups is given in the table. There was a statistically significant difference between the two groups in terms of preoperative parathormone and calcium values. In addition, in patients with giant adenomas, transient hypocalcemia was more likely to develop postoperatively.

**Conclusion:** Patients with giant hyperparathyroid adenomas should be monitored more carefully because of the increased risk of postoperative symptomatic hypocalcemia. In these patients, the need for calcium supplementation is higher.

**Keywords:** Adenoma, giant, hyperparathyroid, primary

## PP-0195 [Endocrine Surgery]

# Giant Mediastinel Thyroid Nodule: A Rare Cause of Dyspnea

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**Introduction:** Goiters with mediastinal localization can reach large sizes because they are usually not noticed in the inspection and they are asymptomatic until they form the findings of compression. The symptoms are related to the pressure effect of the mass on the mediastinal structures. In the anamnesis, progressive dyspnea, cough, and sometimes dysphagia can be defined. In this article, it was aimed to present the diagnosis and treatment process of a patient operated due to a giant mediastinal goiter that caused pressure on the trachea, aorta and right brachiocephalic artery.

**Case:** A 45-year-old female patient was admitted to the outpatient clinic due to swelling on the right side of the neck and increased respiratory distress. In the physical examination, it was seen that the thyroid gland was palpated, apparently in the right side of the neck. Thyroid function tests were normal. Neck ultrasound and tomography revealed a 95x70x66mm bilateral thyroid nodule arising from the enlarged thyroid gland and the right lower pole and causing compression on the trachea, arcus aorta,

and right brachiocephalic artery compression. Because of the compression findings, the patient was taken into an operation and total thyroidectomy was carried out by performing Kocher's incision and sternotomy. The pneumothorax area of the patient gradually expanded after surgery and the patient was applied tube thoracostomy and closed underwater drainage on the 9th day. The patient was discharged on the postoperative 14th day without any problems with the prescription of thyroxine. The result of pathology was reported as multinodular goiter with adenomatous nodule showing cystic degeneration in the right lower pole. The patient has been followed for 17 months with normal thyroid function tests.

**Conclusion:** Surgery for mediastinal thyroid nodules should always be considered because of the high risk of tracheal compression, the suspicion of malignancy, and the low morbidity of the operation regardless of patient age. In cases in which the cervical approach is inadequate, sternotomy can be performed. The possibility of pneumothorax should be kept in mind in cases with continuing dyspnea after surgery.

**Keywords:** Dyspnea, mediastinal thyroid, pneumothorax, sternotomy, thyroidectomy

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## PP-0196 [Endocrine Surgery]

# A Rare Cause of Hypercalcemia in a Young Adult: A Giant Mediastinal Parathyroid Adenoma

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**Introduction:** Parathyroid adenoma is responsible for 85% of cases with primary hyperparathyroidism (PHPT). Those heavier than 3.5 grams are classified as giant parathyroid adenomas. Ectopic parathyroid tissue constitutes 1-16% of PHPT cases. In this article, we aimed to present the diagnosis and treatment process of a patient who was operated due to giant mediastinal parathyroid adenoma.

**Case:** A 35-year-old male patient was admitted to the emergency room with severe headache, palpitation, and vomiting. It was learned from his anamnesis that he had been wearing dental implants due to more than one tooth decays in the last one year and had hypertension for the last 3 years. In the physical examination, his blood pressure was 150/90 mmHg and pulse was 120/min. His laboratory parameters were within normal ranges except serum calcium value of 14,4 mg/dL (Normal range: 8,5-10,5 mg/dL) and parathormone value of (PTH) 1014 pg/mL (Normal range:18-88 pg/mL). The patient was hospitalized with the pre-diagnosis of hypercalcemia secondary to hyperparathyroidism. The serum calcium level was lowered by hydration and diuretic therapy. In the ultrasonography of the neck and parathyroid scintigraphy, a 45x25 mm massive lesion that was extending to the retrosternal region in the left thyroid lodge, which was suspected in terms of vascularized parathyroid adenoma, was observed. In the operation, an approximately 4x8 cm mass with a retrosternal localization in the left thyroid lower lobe and posterior area of the thymus was seen. The borders of the mass were smooth with no surrounding invasion. The mass was resected without the need for sternotomy. There was an adequate decrease in serum PTH values taken before incision and at the 10th minute after operation (997-147). Postoperatively, the patient was discharged as normocalcemic and with normal PTH values. The result of pathology was reported as a cellular nodular parathyroid in a size of 8 x 5 x 2 cm and with a weight of 33 gr. The patient has been followed for 6 months as normocalcemic, normotensive and asymptomatic.

**Conclusion:** Depending on the increase of serum calcium value, PHPT can lead to some problems such as bone fractures, multiple tooth loss incompatible with age, hypertension, and kidney stones. Likewise, it was learned in the retrospective analysis of our patient's hospital records that the patient's serum calcium level was 13.3 mg/dL (Normal range: 8,5-10,5 mg/dL) when he was diagnosed with hypertension. In the occurrence of hypertension and multiple tooth losses in younger patients with normal renal functions, serum calcium value should be evaluated and if it is high, patient should be investigated for PHPT. In addition, the possibility of ectopic parathyroid adenoma should be kept in mind in the cases of PHPT patients not having abnormality in the inspection and palpation.

**Keywords:** Hypercalcemia, parathyroid adenoma, parathyroidectomy

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## PP-0197 [Endocrine Surgery]

# Elongated Parathyroid Adenoma That is not localized in Preoperative Imaging

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**Introduction:** With the development and diversification of imaging modalities, the localization of adenomas can be detected preoperatively in most cases. As a result, minimal invasive surgery is being performed with increasing frequency in primary hyperparathyroidism (PHPT). On the other hand, bilateral neck exploration is still the standard approach for cases that cannot be localized by imaging. In this article, it was aimed to present the diagnosis and treatment process of a patient with elongated parathyroid adenoma, which was not localized by imaging methods but seen in the exploration and excised.

**Case:** A 59-year-old female patient with a known type-2 diabetes was admitted to the outpatient clinic due to bone pain and hypertension. The physical examination was normal. Blood tests were normal except serum calcium level of 12,5 mg/dL (Normal range 8,5-10,5 mg/dL) and parathormone (PTH) of 275 pg/mL (Normal range: 18-88 pg/mL). In the neck ultrasonography, parathyroid scintigraphy, neck tomography (CT), and neck magnetic resonance imaging (MRI) performed with the pre-diagnosis of PHPT, no mass consistent with adenoma was observed. In selective venous sampling, bilateral venous PTH level was found to be above 200 pg/mL. Bilateral neck exploration was planned for non-localized adenoma? and 4 gland hyperplasia?. In the operation, the left lower parathyroid gland was excised because of suspected adenoma, and on the right side, it was seen that the right upper parathyroid gland was 4x0.5cm in size and in the elongated structure. It was excised because of its size. Both excision materials were sent to pathology for frozen examination and PTH from peripheral blood was studied 10 min after excision. According to the frozen examination result, the elongated tissue was consistent with adenoma. It was observed that the PTH values did not decrease after the excision of the left gland (183-193), but decreased sufficiently after the excision of the right gland (183-26). The patient was discharged with normocalcemic and normal PTH values. The patient completed the 9-month follow-up period with normal calcium and PTH values.

**Conclusion:** PHPT is associated with single gland adenoma in 80-85% of cases. In a single gland pathology, scintigraphy has a sensitivity of 91% and ultrasound has a sensitivity of 77-80%. In literature, it has been reported that four-dimensional CT and MRI can be used for the second step of localization. In cases that cannot be localized through preoperative imaging techniques, bilateral neck exploration should be performed and it should be kept in mind that elongated parathyroid glands may be present. Moreover, we believe that frozen examination and intraoperative PTH analysis are necessary in order to confirm the success of the surgery.

**Keywords:** Hypercalcemia, parathyroid adenoma, parathyroidectomy

## PP-0198 [Endocrine Surgery]

# Anaplastic Thyroid Carcinoma Developing After Radioactive Iodine Therapy

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**Introduction:** The treatment options for Graves' disease are antithyroid medications, radioactive iodine (RAI) treatment, and surgery. RAI therapy has been used for the treatment of Grave's disease for a time longer than seventy years, and most studies have reported that it does not increase the risk of cancer. In this article, we aimed to present the diagnosis and treatment process of a patient who was operated for anaplastic thyroid carcinoma (ATC) within two months after a single dose RAI treatment that was applied for toxic goiter.

**Case:** A 62-year-old female patient was admitted to the outpatient clinic of endocrinology because of a rapidly growing, discharging mass on her neck over the last two weeks. After swelling, the patient was evaluated by endocrinology clinic and antibiotic and low-dose corticosteroid therapy was started with the pre-diagnosis of thyroiditis. Our patient was consulted to our department because of growing mass despite the treatment. It was learned from the history of the patient that she had received 10 mCi of RAI treatment for toxic goiter two months ago and his complaints had started 6 weeks after the treatment. She had no history of a known chronic disease. In the physical examination, a hyperemic giant mass with bloody discharge was observed on the neck. The mass was solid in the palpation. No evidence of compression was observed. Thyroid ultrasonography and magnetic resonance imaging of the neck showed a hypoechoic, heterogeneous, 37x38x40mm solid mass in the isthmus, which was not identified in the previous imaging, and pathologic lymph nodes in the neck. The result of fine needle biopsy was interpreted as ATC. In the operation, the mass was removed along with metastatic lymph nodes by obtaining negative surgical

margin as en-bloc. The resulting large tissue defect was closed with pedicled left pectoral muscle-skin flap by the same plastic and reconstructive surgical team in the same session. The patient was discharged on the 6th postoperative day. The result of pathologic examination was reported to be consistent with anaplastic carcinoma. The patient was initiated chemotherapy containing doxorubicin by the medical oncology. However, local recurrence with invasion to the jugular vein developed in the 7th month of follow-up and multiple lung and postauricular and axillary lymph node metastases were observed in the following 3 months. The patient is followed up with palliative treatments in the 17th postoperative month.

**Conclusion:** ATC cases developing in association with RAI treatment performed due to toxic goiter have been reported 4 times in the literature. In the published reports, the average time passing for the development of ATC after RAI treatment is about 15 years. However, in the present case, the symptoms appeared after 6 weeks of treatment and the diagnosis was established by biopsy. We found our case to be worth of presenting because of its being a rare condition and the development of ATC within weeks, unlike the cases reported in the literature.

**Keywords:** Anaplastic carcinoma, Grave's, radioactive iodine therapy, thyroid cancer

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## PP-0199 [Endocrine Surgery]

# Silk Suture Reaction Recurring After Thyroidectomy

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**Introduction:** Silk suture reaction is a benign granulomatous inflammatory reaction against a foreign body. In this article, it was aimed to present the diagnosis and treatment of a patient who was operated due to recurrent silk suture reaction in our clinic.

**Case:** A 54-year-old male patient was admitted to the outpatient clinic with the complaint of discharge from the incision scar on the neck during the last 3 weeks. His history included a total thyroidectomy due to multinodular goiter six years ago and a fistula tract excision due to silk fistula in the thyroidectomy lodge five years ago. In the physical examination, there was no finding except serous discharge on the right side of Kocher's incision scar. Laboratory parameters were within normal intervals. In the neck ultrasonography, a 12x6.7 mm lesion in the posterior area of the strap muscles on the right side and 11x10x7 mm and 11x6 mm lesions in the left paramedian area, which were consistent with silk fistula, were observed. The elective operation was planned because of the continuity of the patient's discharge. The old Kocher's incision scar was revised and the thyroid lodge was opened. It was observed that the reaction was restricted to the bottom of the strap muscles on the right side and the fistula line extended to the lateral area of the trachea on the left side. Bilateral fistula tracts and silk suture materials were excised. After the lodge was washed with diluted oxygenated water and saline, the layers were closed. After the operation, the patient was discharged without any problems. The result of pathology was reported as silk suture material containing fibrosis and inflammation in the surrounding tissue. The patient completed the 8-month follow-up without any symptom and recurrence.

**Conclusion:** Silk suture reaction is a complication that occurs in less than 2% of cases after thyroidectomy. This rate is gradually decreasing after the increased use of absorbable sutures and ultrasonographic sealing devices. The recurrent silk suture reaction has been rarely described in the literature previously. We think this might have been caused by the admission of patients with recurrence to different centers. Therefore, it should be kept in mind that patients with history of suture reaction may develop reaction again in the late period due to residual silk sutures and these patients should be explained about the present pathology and the possibility of recurrence in detail.

**Keywords:** Silk fistula, suture reaction, thyroidectomy

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## PP-0200 [Endocrine Surgery]

# Cystic Adrenal Lesion: Case Report

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**Introduction:** Rarely seen adrenal cystic lesions were defined as endothelial (45%), epithelial (9%), parasitic (7%), and pseudo-cysts (39%) in the modification of the histological classification in 1959 by Foster in 1966. Smaller ones are known as incidental because of their asymptomatic course. Those at the rate between 8% and 15% are bilateral and they are frequent seen between the 3rd and 5th decades. There are reported cases with a diameter ranging from a millimetric size to 50 cm. It is possible to mention heterogeneous etiology and clinical behavior. In this study, we wanted to share a case that was managed in our clinic.

**Case:** A 51-year-old male patient was admitted with the complaints of fatigue and pain that he described as fullness in the left lumbar region. No abnormality was detected in the physical examination. In the laboratory analysis, hemoglobin was 14,6 g/dL, platelet was  $155 \times 10^3/\mu\text{L}$ , and white blood cell count was  $4,9 \times 10^3/\mu\text{L}$ . The whole abdominal contrast-enhanced tomography of the patient, who had no abnormality in the medical history, revealed a 90x76 mm hypodense cystic lesion in the left surrenal lodge, with punctate calcifications in the wall. The left surrenal area could not be clearly visualized. The left kidney was slightly inferiorly displaced. Upon that, a contrast-enhanced upper abdominal MR examination was performed and it showed an approximately 9.5 cm smooth-margined, thin-walled lesion without contrast enhancement and solid component in the left surrenal lodge (surrenal gland-originated benign cyst?), which was consistent with a benign cyst. It was reported that the defined lesion formed an indentation to the kidney from the superior area. A laparoscopic left surrenalectomy was performed using two 10mm and one 5mm trocars in the lateral decubitus position. The 10cm diameter mass was found to be completely cystic. On the second postoperative day, the drain was terminated and the patient was discharged. The result of pathology was reported as adrenal pseudocyst.

**Conclusion:** Very rarely seen cystic adrenal lesions were examined with a prevalence of 1% in the large series of Song JH et al. including 1049 adrenal lesions. In the series of Cavallaro et al., which included 432 adrenalectomy cases, these lesions were reported in 21 cases, 9 of which were associated with hypertension and 7 with other endocrine diseases such as hyperthyroidism. While 11 endothelial cysts, 6 epithelial cysts, 3 pseudocysts, and 1 cystic pheochromocytoma were reported by the pathology department, no malignancy was reported. In literature, there are cases with the etiology of hydatid cyst. Despite surgical indications, symptom onset, size, and suspicion of malignancy, these lesions are often benign and dysfunctional. In the review of Neri and Nance on 515 cases, they reported the malignancy potential as 7% in adrenal cysts. Ricci et al., in their work in 2013, stated that the growth in size did not induce malignancy. In radiologic evaluation, the content, density, wall thickness, calcification pattern, and the absence of contrast enhancement are assessed. Pseudocysts are typically unilocular lesions. The treatment approach is the same with that in non-cystic adrenal masses. Although fine needle biopsy is recommended for the differentiation of malignancy, it has a risk of spreading in the presence of neoplastic cells, as mentioned for laparoscopic unroofing, in the smooth walled, homogeneous, clear cysts. Mini-invasive adrenalectomy should be preferred because of its additional advantages such as patient's return to the normal course more comfortably, especially in the early postoperative period. While the duration of the operation was 98 min in our case, it has been reported as 92 min in the open approach and 86 min in the laparoscopic approach in various series. The open approach should be previously preferred for lesions with a risk of serious malignancy when en-bloc resection, which is the appropriate procedure, cannot be performed.

**Keywords:** Adrenal, cyst, laparoscopy, surrenal

## PP-0201 [Endocrine Surgery]

# Synchronous Papillary and Medullary Carcinoma of the Thyroid Gland in Pregnant Patient: Case Report

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**Introduction:** The mixed type carcinoma of the thyroid gland is a term used to describe tumors showing immunophenotypic and morphologic features of both papillary-medullary and follicular-medullary tumors in the same thyroid gland. Although a few cases have been reported in the literature, there are studies at the molecular level about how these tumors develop. In this study, it was aimed to present a 6-month pregnant patient with synchronous papillary and medullary thyroid carcinoma of the thyroid gland.

**Case:** A 33-year-old 6-month pregnant patient presented to our general surgery clinic with a complaint of swelling on her neck existing for 7 months. There was no radiation exposure history in the patient's anamnesis. She had a history of a known venous insufficiency and a 6-month pregnancy. She had no history of a previous operation and comorbidity. In the physical examination, an immobile, rigid 3.5 x 1.5 cm mass was detected on the right side of the neck. Her thyroid gland was palpable. There were no other palpable masses. In the analysis of the laboratory parameters, routine biochemical values and complete blood count were normal. Thyroid Function Tests are euthyroid. The ultrasound examination of the thyroid revealed that the thyroid gland was larger than normal and there was a 15 mm isoechoic nodule in the left lobe, anechoic colloid cystic structures in the right lobe, and a 4 x 2.5 cm atypical lymph node at the level 5 in the right cervical region. Fine needle aspiration biopsy was performed from the nodule in the left lobe and the pathological lymph node in the right side. The pathologic result of the nodule was reported to be suspected in terms of papillary carcinoma and the lymph node was evaluated as an inadequate material. Then, considering the presence of metastatic lymph nodes in the patient, Bilateral Total Thyroidectomy + Left and Right Functional Neck Dissection was planned. After completing preoperative preparations, the operation was performed. The patient, who did not have any problems in the postoperative follow-ups, was discharged with recovery after replacing the thyroid hormone.

In the postoperative pathological result, it was reported that the tumor in the right lobe was found to be consistent with medullary carcinoma and the tumor in the left lobe was consistent with follicular variant papillary carcinoma. The metastatic lymph nodes in the left lobe were detected to be medullary carcinoma metastases.

**Conclusion:** Although the presence of synchronous or metachronous tumors is an accepted condition in the thyroid gland, approximately 50 cases have been reported in the literature. However, some authors reported an incidence of 19% between papillary microcarcinoma and medullary thyroid carcinoma. In a study by Machens et al., it was found that 26 of 727 patients with thyroid medullary carcinoma had synchronous thyroid papillary carcinoma, and medullary carcinoma was hereditary in 6 of them and sporadic in 20 of them. In our case, the medullary carcinoma was decided to be sporadic based on the result of familial scanning. In these cases, the treatment approach is based on papillary thyroid cancer. In our study, the presence of pregnancy and the metastasis of medullary carcinoma to the other lobe are the distinguishing features of our case.

**Keywords:** Medullary carcinoma, mixed carcinoma, papillary carcinoma

## PP-0202 [Endocrine Surgery]

# The Effect of BRAF Gene Mutation on Regional Lymph Node Involvement in Patients with Papillary Thyroid Cancer

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The most common type of thyroid cancer, papillary thyroid carcinoma (PTC), accounts for 80% of all thyroid cancers. It is one of the most common cancers in the world with 20,000 new cases per year. It is the most frequently encountered cancer among young women under the age of 25 years, with eighth place among the most common types of cancer in the world. At diagnosis, lymph node metastasis is found in 20% of patients, but distant metastases (lung or bone metastases) are rarely encountered. Although many risk factors related to PTC have been described, most of the patients do not have any risk factors in their medical histories at the diagnosis process.

Although the BRAF V600E gene mutation is confronted as the most common gene mutation in PTC, the effect of this mutation on the development of PTC-related mortality and lymph node metastasis has not been clearly demonstrated. Therefore, we aimed to investigate the relationship between BRAF V600E gene mutation and demographic, tumoral and clinicopathological findings in patients with PTC and to evaluate the effect of BRAF V600E gene mutation on regional lymph node involvement in our study.

The BRAF V600E gene mutation analyses of 63 patients (45 female and 20 male) with the diagnosis of PTC between January 2013 and January 2017 was retrospectively performed with PCR. The relationship between the demographic, tumoral and clinicopathologic data of the patients and the BRAF V600E gene mutation was revealed through both univariate and multivariate analyses.

The BRAF V600E gene mutation positivity was detected in 31.7% of the whole patient group. The rate of positive gene mutation was 36% in classical PTC and 100% in TCV-PTC. In the univariate analysis, tumor diameter (p: 0.015), capsule invasion (p: 0.021) and regional lymph node metastasis (p: 0.001) were found to be associated with BRAF V600E gene mutation. In the multivariate analysis, BRAF V600E gene mutation was shown to be an independent risk factor for regional lymph node metastasis. However, no relationship was found between the BRAF V600E gene mutation and regional lymph node metastasis in papillary microcarcinomas (p=0,999).

In conclusion, BRAF V600E gene mutation was found to be associated with the aggressive course of tumor, especially in macro-PTCs, and with regional lymph node metastasis. The appropriate surgical treatment for thyroid cancer, adjuvant treatment, and patient follow-up are still controversial. As seen in the BRAF V600E gene mutation, which was firstly defined in PTC and found to have effect on tumor aggressiveness and regional lymph node involvement, technological advances in molecular biology of thyroid cancer are helpful in eliciting tumor aggressiveness in PTCs.

**Keywords:** BRAF, Papillary, thyroid cancer

## PP-0203 [Endocrine Surgery]

# 598 Parathyroidectomy Cases: A Single Center

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**Objective:** Parathyroid glands were first described by Sir Richard Owen in 1850 with an autopsy performed in an Indian rhino. Hyperparathyroidism, which was considered to be a rare disease presenting with severe skeletal-muscle and renal system complications at the beginning of this century, has been demonstrated to be an illness not as rare as thought as a result of the improvements in radiology, nuclear medicine and biochemical screening tests.

**Material and Methods:** In the Department of General Surgery at Dokuz Eylül University Medical Faculty, 598 patients with hyperparathyroidism were operated between January 1988 and 2018. These patients were retrospectively evaluated with regard to the establishment of the diagnosis, detection of lesion location, selection of the type of surgery, and approach to postoperative follow-up. Thyroid surgery was performed simultaneously with parathyroid surgery in 255 patients (37.6%) who had multinodular goiter.

Blood calcium levels were between 8.8mg/dl and 19.2mg/dl in the primary hyperparathyroidism group and between 6.1mgr/dl and 13.9mgr/dl in the secondary hyperparathyroidism group. Blood parathormone level was between 52 units/ml and 3917 units/ml in the primary hyperparathyroidism group and between 88 units/ml and 2720 units/ml in the secondary hyperparathyroidism group. The preoperative blood ALP level in 215 patients ranged from 19.8 units/ml to 4081 units/ml in the primary hyperparathyroidism group and from 82 units/ml to 1703 units/ml in the secondary hyperparathyroidism group.

In order to determine the location of the lesion, 514 patients were scanned with neck USG and MIBI scintigraphy, 16 patients with neck USG and Tc-99m subtraction scintigraphy, 29 patients only with neck USG, 2 patients with neck MR in addition to neck USG and subtraction scintigraphy. Two patients were not performed any examination before the operation. While preoperative radiological examination revealed that the lesion could be parathyroid adenoma in 497 patients and hyperplasia in 55 patients, radiological diagnosis was not established in 46 patients.

In 201 (38%) of the patients with primary hyperparathyroidism and 24 (49%) of the patients with secondary hyperparathyroidism, hypocalcemia findings were detected in the early postoperative period and calcium therapy was started. In 2 patients with primary hyperparathyroidism, wound infection developed and controlled by oral antibiotic therapy. And, in one patient, DVT developed and treated with anticoagulation. While the mean hospital stay was 5 days in patients with hypocalcemia occurring postoperatively, it was 3 days in patients without hypocalcemia.

**Conclusion:** The increase in the number of patients with hyperparathyroidism in recent years is attributed to the increase in hospital bed capacity as well as the assessment of routine blood Ca and parathormone levels in patients with frequent recurrent attacks of urolithiasis and nephrolithiasis and in patients followed in the outpatient clinics for menopause and osteoporosis. Another important factor is that the endocrinology and endocrine surgery team is more interested in the subject and increasing their experience over time.

**Keywords:** Parathyroid, hyperparathyroidism, surgery

## PP-0204 [Endocrine Surgery]

# How to Calculate Levothyroxine Dosage after Total Thyroidectomy in Benign Thyroid Diseases

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**Objective:** Optimal levothyroxine (LT4) replacement dosage following total thyroidectomy in benign thyroid diseases has critical importance to avoid hypo-hyperthyroidism. The aim of this study is to determine the best method for the calculation of LT4 replacement dose after total thyroidectomy.

**Material and Methods:** Retrospective study. All patients were started the replacement therapy with 100 mcg/day LT4 and the dosage was titrated according to the individualized dose requirement considering the TSH reference interval. The correlations between body weight (BW), ideal body weight (IBW), body surface area (BSA), and body mass index (BMI) and LT4 dose were calculated. The classical method (1.6 mcg/kg/day) and five different methods in the literature were compared in terms of their effectiveness in predicting the LT4 dose.

**Results:** Sixty-seven adult patients underwent total thyroidectomy for benign thyroid disease. The significant correlation between the LT4 dose and BW ( $r=0.445$   $p<0.005$ ), IBW ( $r=0.438$   $p<0.005$ ), BSA ( $r=0.472$ ,  $p<0.005$ ), and BMI ( $r=0.275$ ,  $p<0.005$ ) was determined. When the LT4 initial replacement dose formulas described in the literature were compared, it was found that all formulas provided statistically similar correlations. A regression equation was calculated according to our patient group (estimated LT4 Dose= $21.3 + (0.46 \times \text{Body Weight}) + (0.77 \times \text{Ideal Body Weight})$ ).

**Conclusion:** Although the optimal starting dose of LT4 is still difficult to determine, this formula that we developed may be more effective in achieving the optimal dose in a shorter time in Turkish patients in the postoperative period. The efficacy of the traditional formula based on BW (1.6 mcg/kg) is not statistically very different from the formulas in the literature, so the 1.6 mcg/kg formula, which practically calculates the LT4 dose after total thyroidectomy in benign thyroid diseases, is a reasonable option.

**Keywords:** Total thyroidectomy, thyroid hormone replacement, levothyroxine

## PP-0206 [Endocrine Surgery]

# Factors Affecting Hypocalcemia after Total Thyroidectomy: The Effects of Incidental Parathyroid Excision and Intramuscular Parathyroid Implantation

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**Objective:** The most common complication developing after thyroid surgery is hypocalcemia. Other rare complications are recurrent nerve damage, dyspnea, and massive hemorrhage. Hypocalcemia occurs at the rate that cannot be neglected after temporary or permanent thyroid surgery. We aimed to reveal the factors affecting the development of hypocalcemia in patients who underwent total thyroidectomy in our study.

**Material and Methods:** The files of patients undergoing total thyroidectomy between September 2009 and December 2014 were retrospectively reviewed. Patient files were reviewed for preoperative age, gender, preoperative USG findings, thyroid function tests, postoperative calcium values, pathology reports, and the presence of peroperative parathyroid implantation. The patients who had hypocalcemia (calcium  $\leq 8.5$  mg/dl) according to postoperative calcium values were considered to have transient hypocalcemia and the continuance of hypocalcemia for postoperative one year was accepted as permanent hypocalcemia. Temporary and permanent hypocalcemia rates were statistically compared in terms of incidental parathyroidectomy, peroperative intramuscular parathyroid implantation, and histopathological diagnosis.

**Results:** 824 patients were included in the study. The mean age of the patients was  $46 \pm 1,25$  years. Of the patients, 115 (14%) were male and 709 (86%) were female. Postoperative hypocalcemia development rate was 27.3% (n=225) and permanent hypocalcemia rate was 1.3% (n=11). The presence of malignancy ( $p < 0.001$ ), hyperthyroidism ( $p < 0.001$ ), intramuscular parathyroid implantation ( $p < 0.001$ ) and incidental parathyroid excision ( $p < 0.001$ ) affected the development of transient hypocalcemia and incidental parathyroid excision affected the development of permanent hypocalcemia.

**Conclusion:** According to the results of our study, hyperthyroidism, malignancy, incidence of incidental parathyroidism, transient hypocalcemia and incidental parathyroid excision are permanent hypocalcemia. Peroperative intracardiac parathyroid implantation does not prevent transient hypocalcemia but does not cause permanent hypocalcemia.

**Keywords:** Total thyroidectomy, hypocalcemia, complication

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## PP-0207 [Endocrine Surgery]

# Two Case Reports with Lateral Minimal Incision: Thyroid Lobectomy and Parathyroidectomy

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**Introduction:** Thyroidectomy (MIT) with minimal incision and parathyroidectomy operations have been performed and found to be successful in terms of pain, cosmetic results and length of stay in the hospital. In this article, we will present a patient performed thyroidectomy previously and detected to have Hurthle-cell neoplasia and another patient having parathyroid adenoma and undergoing surgery with lateral mini-incision.

**Case 1:** A 56-year-old female patient with a history of thyroidectomy 25 years ago was referred to our outpatient clinic due to the detection of a  $15 \times 10$  mm thyroid tissue and  $13 \times 6$  mm nodule in the left lobe in the neck ultrasonography (USG). The patient's first surgical pathology was learned to be benign. She had a history of previous heart attack. She had no history of previous operation except thyroidectomy. The results of thyroid function tests (TFT) were within normal intervals. The patient was performed fine needle aspiration biopsy (FNAB) and the result was reported as a Hurthle-cell neoplasia. Operation was recommended to the patient. With an approximately 3 cm mini incision performed on the left sternocleidomastoid (SCM) muscle, the triangular area between the muscles' legs were reached. Lateral area of the thyroid tissue was reached with sharp dissection. Carotid and jugular veins were viewed. The parathyroid gland and recurrent laryngeal nerve (RLN) were viewed and preserved; the artery feeding the thyroid tissue was ligated. The thyroid tissue was fully excised by preserving the RLN. The operation was terminated by placing a minovac drain. No postoperative problem was encountered and the patient was discharged on the 2nd day. The result of pathological evaluation was reported as papillary carcinoma. The patient is not followed by the department of endocrinology without any problem.



**Case 2:** A 43-year-old female patient, who had no additional problems, was admitted to the outpatient clinic of endocrinology due to the complaints of fatigue and headache. It was learned that her complaints lasted for 3 months and did not affect her daily life very much. She had no history of a known disease, drug usage, and operation. In the laboratory analysis, the value of PTH was found to be 206 pg/mL, calcium was 11.4 mg/dL, and TFT was normal. In the neck USG, a 16x10 mm sized appearance consistent with parathyroid adenoma was observed in the left lobe inferiolateral area of the thyroid. Also in the parathyroid scintigraphy and neck magnetic resonance imaging (MRI), there was an image consistent with parathyroid adenoma in the inferiolateral area of the left thyroid lobe. The patient was directed to our outpatient clinic by suggesting an operation. With a 3 cm incision performed on the left SCM, the area between the two legs of the muscle was entered. The dissection was continued, and the carotid and jugular veins were viewed and ruled out. The tissue thought to be parathyroid adenoma was viewed and completely removed with sharp dissection. The result of frozen section analysis was reported as parathyroid tissue. The postoperative PHT value was found to be normalized to 27.5 pg/mL. The patient was discharged on the postoperative 1st day.

**Conclusion:** MIT is an appropriate surgical technique for parathyroid adenomas with certain localizations and for hemithyroidectomies to be applied for solitary thyroid nodules. Previous surgery, multinodular goiter, and obesity are relative contraindications. The choice of lateral minimal incision should be kept in mind in patients with parathyroid adenomas and in appropriate patients who are planned to undergo hemithyroidectomy.

**Keywords:** Thyroidectomy, minimal incision, lateral, parathyroid adenoma, nodule

## PP-0208 [Endocrine Surgery]

# Incidence of Thyroid Cancer in Patients with Hyperthyroidism

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**Objective:** Toxic diffuse goiter (TDG), toxic nodular or multinodular goiter, which are causes of hyperthyroidism, can be associated with thyroid cancer. The aim of our study is to determine the rate of thyroid cancer in patients diagnosed with hyperthyroidism and therefore performed thyroidectomy.

**Material and Methods:** 205 patients who underwent total thyroidectomy for hyperthyroidism in our clinic between March 2014 and November 2017 were retrospectively evaluated. Seventeen patients who had previously received radioactive iodine treatment, undergone thyroid surgery, or given radiotherapy to the neck region were excluded from the study. The included patients were classified as TDG, toxic diffuse nodular goiter (TDNG), toxic diffuse multinodular goiter (TDMNG), toxic nodular goiter (TNG) and toxic multinodular goiter (TMNG) according to their preoperative laboratory, thyroid ultrasonography and scintigraphy results.

**Results:** Of the 188 patients that were included, 127 (67.5%) were female and 61 (32.5%) were male and the mean age was 49.66±13.66 years. TDG was found in 69 patients (36.7%), TDNG in 15 patients (8.3%), TDMNG in 74 patients (39.3%), TNG in 7 patients, and TMNG in 23 patient (%12,3). The results of preoperative thyroid fine needle aspiration biopsy were reported as non-diagnostic in 41 (21.6%) patients, benign in 52 (28%) patients, atypia with undetermined significance in 22 (12%) patients, suspected follicular neoplasia in 12 (6.4%) patients, suspected malignancy in 5 (2.4%) patients, and malignant in 3 (1.6%) patients. The histopathological examination of total thyroidectomies revealed 6.4% micropapillary, 4.2% macropapillary, and 0.5% medullary thyroid carcinoma in patients and the total malignancy rate in patients was 11.1%. When classified according to preoperative diagnosis, the incidence of thyroid cancer was 14,4% in TDG patients, 12,1% in TDMNG cases, and 13% in TMNG cases.

**Conclusion:** In our study, thyroid papillary microcarcinoma was the most common disease among the all cases. The patients with the diagnosis of hyperthyroidism have the risk of thyroid cancer and malignancy rates up to 20% have been reported in the literature. Therefore, attention should be paid to the possible malignancy in hyperthyroidism patients followed up with non-surgical treatment options.

**Keywords:** Hyperthyroidism, thyroidectomy, thyroid cancer

## PP-0209 [Endocrine Surgery]

# A Rare Case: Nonrecurrent Laryngeal Nerve

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**Introduction:** Although surgeries for the thyroid and parathyroid gland are usually without complications, some complications such as nerve injury and vascular injury may sometimes be seen. Anatomical variations are one of the causes of these injuries. Non-recurrent inferior laryngeal nerve (NRLN) is a nerve variation that is very rarely encountered in thyroidectomy operations. It is usually found on the right side. Left-sided cases are very rarely reported in the literature and they are often accompanied by situs inversus anomalies. The recognition and protection of this nerve is very important for the postoperative life of the patient.

**Case:** A 55 - year - old female patient was admitted to the outpatient clinic of general surgery due to the complaint of palpable swelling on her neck. She had no complaints other than swelling on her neck. In the physical examination, there was a 2.5 cm nodule on the left. Her laboratory values were found to be normal. The neck ultrasonography revealed hypoechoic multiple nodules, the largest of which was 29 mm in the left side and 9 mm in the right side and there was no lymph node. Total thyroidectomy was recommended to the patient as a result of the examinations performed. In the operation, routine nerve dissection was performed for both sides. On the left side, recurrent laryngeal nerve (RLN) was found. However, there was no evidence of a nerve in the dissection performed near the inferior thyroid artery (ITA) on the right side. When the dissection was extended, NRLN extending from the carotid sheath to the Berry ligament was detected. The dissection was carefully continued and the nerve was completely isolated and preserved. The patient did not have Zuckerkandl's tubercle. On the first postoperative day, the patient was discharged without any complication. The pathological evaluation was reported as multinodular goiter.

**Conclusion:** Nerve injury can result from the presence of anatomical variations and the inconstant pathway of the recurrent laryngeal nerve (RLN) a constant pathway as well as the surgeon's inexperience, incorrect dissection, used surgical instruments, and adhesions due to surgical surgery in the surgical lodge. The most effective method for the recognition of this variation is to perform appropriate nerve dissection intraoperatively. The majority of nerve injuries are at the entrance of the nerve to the larynx. For this reason, the nerve dissection should be performed from the bottom to the top. Generally, the nerve is searched at the point where it first crosses with the ITA. If not present here, the dissection is advanced upwards and the nerve is revealed by continuing careful dissection around the Berry ligament and the entrance of the nerve to the larynx. In some cases, NRLN may not be found with standard nerve dissection. In such a case, NRLN can be found with careful dissection starting from the carotid sheath to the medial part. It has been reported that the use of intraoperative nerve monitoring facilitates the detection of NRLN and reduces the rate of nerve damage. However, it is not routinely used due to cost problems, although its use is increasingly becoming widespread.

No anatomic model should be evaluated in a standard way during thyroid surgery and the nerves, veins, and their anatomical variations that affect their placement with respect to each other should be known. It should not be forgotten that being aware of these anatomical variations is vital for patient.

**Keywords:** Non-recurrent laryngeal nerve, thyroidectomy, nerve exploration, inferior laryngeal nerve

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## PP-0210 [Endocrine Surgery]

# Do the Sizes of Thyroid Nodules Reported as Bethesda Category 3, 4, and 5 Affect Malignancy Rates?

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**Objective:** Fine Needle Aspiration Cytology (FNAC) is an important and widely accepted method used for the diagnosis of patients with thyroid nodules. The procedure is simple, safe for patient, and low-cost. For the FNAC to be used with higher sensitivity and accuracy, the US National Cancer Institute established the "Bethesda System for Reporting of Thyroid Cytopathology" in 2007. The validity of this new reporting system has been demonstrated by many researchers.

**Material and Methods:** In this study, in patients with FNAC results of Bethesda Category 3 (AUS: atypia of undetermined significance, AFLUS: follicular lesion of undetermined significance), Bethesda Category 4 (SFN: suspicious for a follicular neoplasm, HCN: suspicious for Hurthle cell neoplasm) and Bethesda Category 5 (SM: suspicious for malignancy), the actual malignancy rates and patient age, gender and radiological diameter that could affect them were investigated. The records of 239 patients whose thyroid nodules were examined through FNAC according to their clinical and radiological findings in our hospital between 2013 and 2017 were retrospectively reviewed.

**Results:** The mean age of the patients included in the study was 49 (21-77) years and 205 (86%) of them were female. In this series, the mean size of the nodule was 15 mm (2-65) and it was determined that 66 nodules (28%) were 20 mm and larger. Total thyroidectomy was performed in 224 patients (94%). In the Bethesda Category 3, 69 nodules (29%) were reported as AUS, and 4 nodules (2%) as AFLUS. In the Bethesda Category 4, 35 nodules (15%) were reported as SFN and 21 nodules (9%) as HCN. In the Bethesda Category 5, 110 nodules (46%) were reported. The mean tumor sizes in these groups were 18, 9, 17, and 12 mm, respectively. Malignancy was detected in 173 patients (72%) in the whole series. Of these, 146 were papillary carcinoma (61%), 24 were micropapillary carcinoma (10%), two were medullary carcinoma (1%), and one was follicular carcinoma. The cancer rate

in the Bethesda Category 3 was 56.5% and 100% for AUS and AFLUS, respectively, which are higher than the expected rates of 5-15%. In the Bethesda Category 4, the cancer rates for SFN and HCN were 71% and 48%, respectively, which is higher than the expected rates of 15-30%. In the Bethesda Category 5, the cancer rate was detected to be 86%, which is also higher than the expected rates of 60-75%. It was observed that age (1-50 vs >50), sex, and radiological diameter (0-15 vs. 15-100 mm and 0-19 and >20 mm) had no effect on the prediction of malignancy in univariate and multivariate analyses.

**Conclusion:** In this study, the malignancy rates in the Bethesda Category 3, 4, and 5 lesions were found to be higher than the expected rates in the literature, independent of nodule size. These results might have been due to the timid behaviors of pathologists for diagnosing cancer with cytological findings and reporting not performed by a single hand. All clinics using the Bethesda reporting system should know their own malignancy rates and establish appropriate clinical approaches.

**Keywords:** Bethesda, malignancy, thyroid cancer

## PP-0211 [Endocrine Surgery]

# An Alternative Approach to Parathyroid Adenoma Treatment: Radiofrequency Ablation

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**Objective:** Parathyroid adenoma is the major cause of primary hyperparathyroidism (80-85%). Today, its main treatment is surgery. However, it has some limiting factors such as conditions with high surgical risk, the appearance of the scar tissue on the neck after the procedure, and the difficulty in the localization of adenoma during surgery. Moreover, in those having previously undergone a surgery on the neck region, the re-operation of this region is also a limitation. The use of minimally invasive thermal ablative technology, which has been developed in recent years, under the guidance of ultrasound has led to a new approach.

**Material and Methods:** The findings of 5 patients diagnosed with parathyroid adenoma in our clinic in 2017 were retrospectively evaluated.

Patients' Ca and PTH levels before and after the RFA procedure were evaluated. In the first patient, pre-RFA value of Ca was 11.8 and PTH was 140 and post-RFA value of Ca: was 9.2 and PTH was 42. In the second patient, pre-RFA value of Ca was 12 and PTH was 117 and post-RFA value of Ca was 10.7 and PTH was 67. In the third patient, pre-RFA value of Ca was 11.38 and PTH was 104.7 and post-RFA value of Ca was 8.93 and PTH was 29.31. In the fourth patient, pre-RFA value of Ca was 10.8 and PTH was 385 and post-RFA value of Ca was 9.8 and PTH was 9.87. In the fifth patient, pre-RFA value of Ca was 11.4 and PTH was 230 and post-RFA value of Ca was 10.8 and PTH was 148.6.

**Results:** RFA has been successfully used in the treatment of primary and secondary tumors in the thyroid, lung, and liver for a long time. The RF ablation method is successfully used in parathyroid adenomas under the guidance of the high resolution of ultrasound. The RF ablation denaturalizes the functioning parathyroid tissue thermally. It creates this thermal effect through the friction effect associated with the oscillation of the ionic medium in the tissue in the direction of the frequency of the radio waves coming from the antenna. In a live tissue, 55-60 C of heat is required for a permanent thermal lethal effect. All of our patients first applied with high PTH value. Adenoma was diagnosed by 99m Tc MIBI scintigraphy and characteristic ultrasonographic findings. The patients were treated with sedation after the necessary anesthesia consultations. The RF antenna placed in the adenoma under ultrasound guidance was ablated with energy level and duration adjusted according to the adenoma size, by observing in real time under ultrasound. It has gradually decreased after the procedure.

**Conclusion:** RFA is an ambulatory procedure that can be an effective alternative to surgery in parathyroid adenomas. Its morbidity is low. However, it is necessary to pay careful attention to recurrent laryngeal nerve injuries during the procedure.

**Keywords:** Radiofrequency ablation, parathyroid, adenoma

## PP-0212 [Endocrine Surgery]

# A Rare Adrenal Mass in an Adult Patient: Ganglioneuroma

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**Introduction:** Ganglioneuroma is a rare tumor of the surrenal gland. It originates from the neural crest cells. In this article, a case pathologically reported as mature ganglioneuroma after laparoscopic left surrenalectomy will be presented.

**Case:** A 57-year-old female patient, who was performed the abdominal magnetic resonance imaging (MRI) due to another reason at an external center a few months ago and detected to have an approximately 7x5 cm mass lesion with heterogeneous contrast enhancement in the left adrenal, was admitted to the outpatient clinic of endocrinology in our hospital. The patient had no active complaints. She had a history of hysterectomy due to uterus myoma. No pathological findings were found in the blood and hormone tests performed by the department of endocrinology. The abdominal computed tomography (CT) of the patient showed a 7x5 cm mass and it was reported to be possible non-adenoma mass lesion or adenoma with poor fat. The patient was recommended to undergo an operation by the endocrinology council. The operation was laparoscopically performed by using two 10 and one 5 trocars in the right lateral decubitus position. The left surrenal adenoma and gland were found without any complications and they were totally excised after the vessels were clipped. In the postoperative period, the patient had no problems and she was discharged on the 4th day. The pathological result was reported as 7x5x4 cm mature ganglioneuroma. Endocrinology outpatient clinic controls continued without any adverse events.

**Conclusion:** Ganglioneuroma is a rare tumor of the surrenal gland which is usually asymptomatic and not functioning hormonally. These tumors are among the benign tumor of the sympathetic nervous system and they can be encountered in any region where the sympathetic nerves are present. They are most commonly seen in the mediastinum and retroperitoneum. They usually grow slower. They are reported to be seen more frequently in women and in those at the ages under 20s. They are usually asymptomatic and incidentally encountered. In large-sized ones, various symptoms related to the pressure may occur. A small portion of them may be hormonally active and may cause symptoms such as hypertension, sweating, and virilisation due to secreted hormones such as catecholamines and androgens. Although the mass can be viewed by imaging methods such as CT and MRI, it is not possible to differentiate it from other surrenal masses. The definite diagnosis can only be made by pathological examination after surrenalectomy. While only ganglioneuroma exists in the mature form, neuroblastoma and ganglioneuroblastoma components can be observed in the mature form. From this respect, the pathological examination needs to be done carefully. Excision is an option of curative treatment. Recurrence is not expected. Although these tumors are considered as benign, there are some studies reporting that they can lead to lymph node metastasis.

Ganglioneuroma is a rare lesion of the surrenal gland. In surrenal-associated masses, it should be remembered in the preliminary diagnoses. The final diagnosis is established by pathological examination after surgery.

**Keywords:** Surrenal, mass, ganglioneuroma

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## PP-0213 [Endocrine Surgery]

# Parathyroid Adenoma: Our Single-Center Experience on 57 Cases

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**Objective:** To retrospectively evaluate the data of 57 patients who were operated due to primary hyperparathyroidism (PHPT) and histopathologically diagnosed with parathyroid adenoma (PTA).

**Material and Methods:** The data obtained from hospital records of 57 patients who underwent surgery for PHPT in our surgical clinic between January 2010 and December 2015 and diagnosed with PTA were retrospectively evaluated in terms of the demographic, histopathologic and biochemical.

**Results:** The median age of the patients was 54 (17-77) years, and 48 were female (84%) and 9 were male (16%). The median follow-up was 28 months. The most common complaints were bone and joint aches, weakness, and fatigue. Preoperative parathormone (PTH) and calcium levels of all patients were evaluated. Preoperative hypercalcemia was detected in 47 (82%) of the patients. The median preoperative serum PTH level was  $287 \pm 348$  ng/L and calcium level was  $11.5 \pm 1.4$  mg/dL. As preoperative imaging methods, neck ultrasonography (US) was performed in 15 patients (26%), neck US and <sup>99m</sup>Tc-MIBI in 38 patients (67%), and other methods in the remaining 4 patients (7%). Thirty-nine patients (68%) were applied unilateral and 18 patients (32%) were applied bilateral neck exploration. The number of patients who also underwent thyroid surgery was 16 (28%). 51 (89.5%) of the patients had single adenomas, 5 (8.7%) had two adenomas and 1 (1.8%) had 3 adenomas. Of the lesions, 16 (28%) were located in the upper pole of the thyroid, 38 (67%) in the lower pole, and 3 (5%) in the other localizations. The mean size of the removed adenoma was  $1.9 \pm 0.9$  cm. The mean postoperative serum PTH level was  $49 \pm 52$  ng/L and calcium level was  $8.6 \pm 0.8$  mg/dL. Persistent hypercalcemia was detected in one patient (1.7%) and recurrence in another patient, and subjective complaints continued in 3 patients (5%).

**Conclusion:** The cause of PHPT is single adenoma at the rate of 80-85%, hyperplasia at the rate of 10-15%, multiple adenomas at the rate of 3%, and parathyroid carcinoma at the rate of 1%. Only patients who were diagnosed with PTA were included and

examined in this study. In the vast majority of patients, a single adenoma was present and the rate of multiple adenomas was detected as 10.5%. Two thirds of the patients had adenomas located in the lower pole of the thyroid. These ratios were found to be consistent with the literature. The most common complaints in PHPT patients are bone and joint pains. PTA should be kept in mind in patients with nonspecific bone and joint pains with unknown etiology because the PHPT picture caused by PTA is a highly curative disease with surgical treatment.

**Keywords:** Parathyroid adenoma, primary hyperparathyroidism, parathyroidectomy

## PP-0214 [Endocrine Surgery]

# Assessment of Thyroid Cancer Frequency in Graves' Disease

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**Objective:** Graves' disease is the most common cause of hyperthyroidism. Thyroid cancers are the most common cancers of the endocrine system. Although Graves' disease and thyroid cancers are frequently encountered diseases, the coexistence of both diseases is a rare case, which suggests that hyperthyroidism has a protective effect against thyroid cancer. In this study, we aimed to determine the incidence of thyroid cancer in patients performed thyroidectomy due to Graves' disease.

**Material and Methods:** The files of 210 patients who underwent thyroidectomy for Graves' disease between 2009 and 2018 were retrospectively reviewed. Of them, 38 patients performed thyroidectomy for Graves' disease and pathologically diagnosed with thyroid cancer were evaluated in terms of their demographic and clinical characteristics. Thyroidectomy was decided to be performed in patients followed for Graves' disease, who did not respond to drug treatment, had side effects related to drug treatment, had malignancy findings in fine needle aspiration biopsy, and were not eligible for radioactive iodine therapy (RAI). The patients with non-Graves' disease and having toxic nodular and multinodular goiter causing hyperthyroidism were excluded from the study.

**Results:** Of the patients, 25 (65.8%) were female and 13 (34.2%) were male, and the mean age was 40 (17-68) years. Twenty-five (11.9%) patients had a familial history of Graves' disease. Ultrasonographic examination revealed nodules in the thyroid gland in 22 patients. Fine needle aspiration biopsy (FNAB) was performed in ten (26.3%) patients. Of the patients, 7 (18%) had benign suspect, 2 (5.3%) had malignancy suspect, and 1 (2.6%) had papillary neoplasia. Pathologic examinations of the patients undergoing thyroidectomy revealed thyroid cancer in 38 (18%) patients. Micropapillary lesions were found in 24 (63.2%) patients, papillary carcinoma in 10 (26.3%) patients, papillary and micropapillary carcinoma in 2 (5.3%) patients, medullary carcinoma in 1 (2.6%) patient, and follicular and micropapillary carcinoma in 1 (2.6%) patient. The most common complication after thyroidectomy was hypocalcemia in 11 (28.9%) patients. One patient underwent neck dissection after thyroidectomy. Twelve patients were applied RAI therapy. The mean follow-up period of the patients was 30 (3-108) months. In the follow-ups, 2 (5.2%) patients had papillary cancer recurrence in the thyroidectomy lodge in the 12th and 18th months. The RAI treatment was applied to both patients. No recurrence was observed in the follow-ups. In the postoperative follow-ups of one patient with the diagnosis of medullary thyroid cancer, the level of calcitonin was low and no pathology was observed in the neck USG. Therefore, no additional central and lateral neck dissection was performed. No recurrence developed in the 23-month follow-up of this patient.

**Conclusion:** Although the coexistence of Graves' disease and thyroid cancer is rare, FNAB should definitely be performed particularly in patients followed for Graves' disease and detected to have nodule in USG. Surgical treatment option should be primarily considered in Graves' disease patients with nodule in the thyroid gland.

**Keywords:** Graves' disease, thyroid cancer, nodule

## PP-0215 [Endocrine Surgery]

# Adrenal Cystic Lymphangioma: Two Case Reports

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**Introduction:** Cystic lymphangioma is an extremely rare lesion originating from lymphatic endothelial cells. Anatomically, these lesions are often seen in the axilla and neck region, but 5% of them are encountered in the intraabdominal region. We aimed to present 2 cases of adrenal cystic lymphangioma, which is extremely rare and therefore present as case reports in the literature.

**Case 1:** A 19-year-old female patient was performed ultrasonography due to loss of appetite and right side pain. The ultrasonography revealed an 8x6 cm thick-walled cystic lesion in the liver segment 6 localization and the patient was

referred to our center with the pre-diagnosis of a hydatid cyst of the liver. No abnormal feature was observed in the physical examination and laboratory tests performed at admission. Oral and iv opaque computerized tomography revealed a 59x99 mm, slightly lobulated-contoured pure cystic lesion with the localization of right surrenal gland and with the wall including small septation and millimetric calcification. The patient was operated with the pre-diagnosis of adrenal cyst hydatid and simple adrenal cystic lesion. At the exploration, a well-demarcated cystic lesion with the right adrenal origin was detected and removed. On the same day after the surgery, oral feeding was started and the patient was discharged on the postoperative 2nd day. A week later, she was evaluated for control and no problem was observed. The pathological result was reported as right adrenal-derived cystic lymphangioma. No recurrence was observed during the 27-month follow-up of the patient.

**Case 2:** A 28-year-old male patient was found to have a 20x18 cm mass in the intraabdominal region in the lumbar MR performed due to backache. In the whole abdominal MR carried out for the investigation of the etiology of intraabdominal mass, a cystic mass thought to be mesenteric origin was observed. No abnormal feature was detected in the physical examination and laboratory tests of the patient who was referred to our hospital with these findings. The patient was taken into operation with the pre-diagnosis of mesenteric cystic mass. The examination demonstrated a giant cystic mass, which pushed the transverse colon completely filling the midline of the abdomen to the lower quadrant of the abdomen and pulled up the right kidney and adrenal gland, which it originated from, to the right upper quadrant of the abdomen. During the dissection, the cyst was opened and aspirated. Samples for cytology were taken from the fluid. Cystic lesion was removed with right adrenal gland. Oral feeding was started on the first postoperative day and the patient was discharged on the postoperative third day. A week later, the patient was evaluated for control and no problem was observed. Pathological result was reported as right adrenal-derived cystic lymphangioma. No recurrence developed in the 18-month follow-up of the patient.

**Conclusion:** Total excision should be performed on adrenal cystic lymphangiomas which do not have a common diagnosis and treatment algorithm because they are available as case reports in the literature. In the cases undergoing total excision, recurrence is not observed in long term follow ups. Surgery is the sufficient and effective treatment method.

**Keywords:** Adrenal gland, cystic lymphangioma, surgical treatment

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## PP-0216 [Endocrine Surgery]

# The Effects of Genetic Factors on the Clinical Course and Prognosis of Papillary Thyroid Cancer

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**Objective:** The aim of this study was to investigate the effects of BRAF, RAS, and TERT gene mutations and c-Met gene overproduction, which are thought to be associated with recurrence and metastasis, on the clinical course and prognosis of papillary thyroid cancer.

**Material and Methods:** In the tissue blocks of 84 patients with papillary thyroid carcinoma between 2005 and 2015, the c-Met gene amplification was investigated with the FISH method, and BRAF, RAS and TERT gene mutations were investigated with the PCR-Based Direct Sequencing Method. The findings were compared with clinicopathological features such as age, gender, histological type, tumor size, type of invasion, multicentrism, extrathyroidal spread, presence of metastatic lymph nodes and recurrence. Statistical analysis was performed by using the SPSS software. The categorical data were compared with the Chi-Square and Fisher's exact tests. The factors influencing disease-free survival were evaluated by using the Multivariate Analysis and Cox Regression analysis. The value of  $p < 0.05$  was considered to be statistical significant.

**Results:** The BRAF mutation was found to be positive in 80.4% of 56 classic variant cases, which was statistically significant ( $p=0,001$ ). The TERT mutation was found to be associated with advanced age ( $p=0,033$ ) capsule invasion ( $p=0,004$ ), lymphatic invasion ( $p=0,012$ ) and increased recurrence rates ( $p=0.041$ ), high MACIS score ( $p=0.001$ ), and disease-free survival ( $p=0.004$ ). There was no correlation between clinicopathologic features and c-Met gene amplification and RAS mutation ( $p > 0.05$ ).

**Conclusion:** It was evaluated that, in papillary thyroid cancer, classical variant cases frequently display BRAF mutation and those with TERT gene mutation should be followed for risk of recurrence.

**Keywords:** Papillary thyroid carcinoma, BRAF, RAS, TERT, c-Met

## PP-0217 [Endocrine Surgery]

## Our Experience of Thyroidectomy and Parathyroidectomy (TOETVA/TOEPVA) with Transoral Endoscopic Vestibular Approach

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Thyroid and parathyroid surgery with the transoral endoscopic vestibular approach (TOETVA/TOEPVA: Transoral endoscopic thyroidectomy/parathyroidectomy vestibular approach), has become increasingly widespread as a new surgical method that is promising for its long-term outcomes, which has been demonstrated to be safe and effective and offers almost excellent cosmetic results without suture marks by providing a chance of natural access (NOTES: Natural orifice transluminal endoscopic surgery) among the minimally invasive neck surgery techniques described up to now. In this study, we aimed to present our experience of thyroid and parathyroid surgery with a transoral endoscopic vestibular approach that we applied. The first TOETVA surgery was practiced on August 23, 2017, and so far, we have had 3 TOETVA (1 total thyroidectomy, 2 lobectomies) and 3 TOEPVA experience. In two of them (one was total thyroidectomy and the other was parathyroidectomy), the operations were completed by conversion to open surgery. The reason for conversion to open surgery was severe adhesion in the total thyroidectomy case and the development of hypotension and bradycardia, which occurred at the beginning of surgery and were reported as vasovagal reflex by the anesthesiologists, in the parathyroidectomy case. After informing the patients, they were administered oral care before surgery, chlorhexidine solution was used for intraoral cleaning, and appropriate antibiotic prophylaxis was applied for oral flora. After nasotracheal intubation with a suitable intubation tube for nerve monitoring, the classical neck surgery position and hyperextension were provided. The head region of the patient, which was the operation site, was covered with a sterile material. The oral vestibular area was entered with a 10mm camera port in the middle and two operative ports of 5 mm in both lateral areas and the subplatysmal region was insufflated. The maximum CO2 insufflation pressure was adjusted as maximum of 6 mmHg. In the anterior neck region, the subplatysmal area was dissected until the sternal notch below and the sternocleidomastoid muscles in the lateral parts. The strap muscles were opened at midline with a power device and hanged on the front wall of the neck with percutaneous hanging sutures to provide better vision. For thyroid lobectomy cases, lobectomies were completed by starting with isthmectomy and progressing from the cranial to the caudal and from the medial to the lateral areas. For vascular checking, energy device was used. For monitoring recurrent laryngeal nerve, monopolar nerve stimulation probe, which was modified and extended for endoscopic surgery, was used. The resected material was expanded according to the specimen size, if necessary, and removed from the 10 mm port site. No drain was used in any case. The port sites were closed with absorbable sutures. In the postoperative period, the patients did not have any events and they were given oral amoxicillin-clavulanic acid antibiotherapy and antiseptic oral rinse solution for 5 days. Except the temporary hoarseness in the first thyroid lobectomy case, the only early morbidity was mild and moderate ecchymosis in the traces of the port sites. However, all disappeared in a week at the latest. No mental nerve damage was observed. In the follow-ups of the patients, it was observed that their treatment satisfaction with this technique was at a high level.

**Keywords:** TOETVA, TOEPVA, thyroidectomy with transoral endoscopic vestibular approach, parathyroidectomy with transoral endoscopic vestibular approach, endoscopic neck surgery

## PP-0218 [Endocrine Surgery]

## Is Vitamin D Deficiency Associated with Lymphocytic Thyroiditis?

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**Objective:** It is known that vitamin D (D vit) has an antiinflammatory and immunomodulatory effect on the immune system cells with endocrine effect. Although some studies have reported that there may be a relationship between autoimmune thyroid diseases and vitamin D deficiency, this issue is still controversial. In our study, it was aimed to evaluate the relationship between lymphocytic thyroiditis and vitamin D deficiency.

**Material and Methods:** The patients who were operated and detected to have papillary thyroid carcinoma (PTC) or benign thyroid disease in their pathological evaluations between 2012 and 2017 and whose preoperative vitamin D tests were reached were included in the study. The patients with non-PTC cancers and hyperparathyroidism and/or patients receiving vitamin D therapy were excluded from the study. The patients were divided into 2 groups according to the main pathology in the pathology reports or the examination of normal thyroid tissue, as those with lymphocytic thyroiditis (Group 1) and those without lymphocytic thyroiditis (Group 2). The vitamin D deficiency was defined as the value of  $\leq 20$  ng/mL. The patients were statistically divided into four quartiles according to the preoperative vitamin D and TSH values and compared.

**Results:** Group 1 included 149 (F:117, M:32) patients and group 2 included 108 (F:92, M:16) patients. The mean age was higher in Group 2 (48.82+13.57 years) than in Group 1 (44.8+13.2 years) ( $p=0.005$ ). In Group 1 and 2, the level of anti-TPO was 165.6+403 vs 18.5+57.5 ( $p<0.001$ ), respectively, and Anti-Tg positivity was 259+631 vs 80%+402 ( $p<0.001$ ), and the differences were significant. Gender, hyperthyroidism and PTC rate, preoperative parathormone and ALP values were not significantly different between the groups. Preoperative TSH level (mean + SD mIU/mL) was significantly higher in group 1 (2.2 + 2.7) than in group 2 (1.5 + 1.55) ( $p=0.017$ ). The distribution rates of group 1 and 2 patients according to TSH levels were as follows: 33.3%, 46.9% in category 1 (TSH<0.94), 13%, 20.4% in category 2 (TSH 0.95-1.58), 19.4%, 15% in category 3 (TSH=1.59-2.4), 34.3% and 17.7% in category 4 (TSH>2.4), respectively. In group 1, the rate of category 4 patients was significantly higher ( $p=0.006$ ). The preoperative vitamin D levels in groups 1 and 2 (mean + SD) were (16.60 + 15.18) vs 13.97 + 10.03 ( $p=0.409$ ) and vitamin D deficiency rates were 67.6% vs 72.3% ( $p=0.499$ ), and no statistically significant difference was found. When classified according to the preoperative vitamin D values, the distribution rates of group 1 and 2 patients were 25% and 25.7% in category 1 (D vit<6.21), 19.4% and 28.4% in category 2 (D vit:6.22-10.69), 29.6% and 21.6% in category 3 (D vit:10.7-22.68), and 25.9% and 24.3% in category 4 (D vit>22.69), respectively. There was no statistically significant difference ( $p=0.296$ ). In the Pearson correlation test, there was a positive correlation between preoperative lymphocytic thyroiditis and TSH (Pearson correlation=0.161,  $p=0.10$ ), anti TPO (Pearson correlation=0.262,  $p<0.001$ ), and preoperative anti-Tg (Pearson correlation=0.171,  $p=0.016$ ). There was a negative correlation between preoperative lymphocytic thyroiditis and age (Pearson correlation=-0.152,  $p=0.015$ ).

**Conclusion:** Vitamin D deficiency is high in patients with and without lymphocytic thyroiditis in their pathologies. While there was a positive correlation between lymphocytic thyroiditis and age, preoperative TSH, preoperative anti-Tg and anti-TPO levels, but no significant relationship with vitamin D level. The presence of lymphocytic thyroiditis is not associated with higher level of vitamin D deficiency.

**Keywords:** Anti-Tg, anti-TPO, vitamin D, lymphocytic thyroiditis, autoimmune

## PP-0219 [Endocrine Surgery]

# Case Report: Parathyroid Adenoma with Ectopic Localization

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**Introduction:** Primer hyperparathyroidism (P-HPT) is a clinical picture characterized by hypercalcemia caused by excessive parathormone secretion from one or more glands. Solitary parathyroid adenoma and diffuse hyperplasia, and more rarely multiple adenoma and carcinoma are the pathologies that can be cause of P-HPT. In the majority of cases with persistent or recurrent hyperparathyroidism after surgery, the cause is the presence of ectopic or parathyroid tissue more than normal. Especially, ectopic parathyroid pathologies located in the mediastinum can be overlooked in the ultrasonographic evaluation. In this way, there are 2 or more re-exploration requirements unless preoperative specific localizations are performed in 4 of 10 patients whose first surgical interventions have failed. We aimed to present our patient with retro-tracheal parathyroid adenoma, which is an abnormal localization of the parathyroid gland.

**Case:** A 51-year-old female patient. The patient was examined because the bone densitometer revealed diffuse osteoporosis. Her calcium (Ca: 11.5 mg/dL) and parathormone levels (PTH: 341.3 pg/mL) were detected to be high and diagnosed with primary hyperparathyroidism. The result of preoperative neck ultrasonography (USG) and parathyroid scintigraphy was reported as a finding consistent with parathyroid adenoma in the upper pole of the right thyroid lobe. In neck USG, thyroid parenchyma, echogenity and size were normal. In the operation of the patient, a tissue similar to the parathyroid tissue was not seen in the middle and upper part of the right thyroid lobe. By considering the presence of ectopic tissue, the upper pole of the thyroid was returned. Approximately 3x4 cm parathyroid tissue extending to the posterior area of the trachea under the upper pole was observed. After the excision of the parathyroid gland, the peroperative parathormone level was found to be 49 pg/mL (12-65) and the operation was accepted to be adequate and terminated. On the postoperative 1st day, the blood calcium level was measured as 8.7 mg/dL (8.8-10.6) and the blood parathormone level as 57 pg/mL. In the control evaluations in the first month, the calcium value was 9.6 mg/dL and parathormone value was 66 pg/mL.

**Conclusion:** Primary hyperparathyroidism (P-HPT) is a picture presenting with hypercalcemia, which is caused by excessive parathormone secretion from one or more glands. Despite a high serum calcium level, the pathological glands continue to secrete excessive PTH because normal feedback inhibition is impaired. Solitary parathyroid adenomas, diffuse hyperplasia and



carcinoma are the pathologies causing P-HPT. The exploration of four glands is recommended in classical parathyroid surgery and it is reported that bilateral cervical explorations performed with this method have 95% of cure rate and less than 1% of morbidity rate at the first surgery in experienced centers. In conclusion, in centers performing parathyroid surgery, it should be taken into consideration that localization differences may occur besides the normal anatomical features of the parathyroid glands.

**Keywords:** Parathyroid adenoma, primary hyperparathyroidism, ectopic localization

## PP-0220 [Endocrine Surgery]

# Supraclavicular Cystic Mass: A Rare Metastasis of Occult Micropapillary Thyroid Cancer

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**Introduction:** Occult thyroid cancers can be defined as thyroid cancers that cannot be detected clinically but presents with metastasis or paraneoplastic syndrome. Thyroid micropapillary cancers are defined as the tumors smaller than 10 mm in the thyroid. Papillary microcarcinomas constitute 6-36% of thyroid papillary cancers and occult thyroid cancers constitute 0.1-2.2% in this group. The cystic metastasis of occult papillary cancer in the neck is limited to a few cases in the literature. In this study, we aimed to present a patient with occult thyroid micropapillary cancer, presenting with cystic metastasis in the neck.

**Case:** In the anamnesis and epicrisis of a 52-year-old female patient, it was learned that she had a swelling on her neck for 4 - 5 months, a left supraclavicular cystic mass was detected in the neck ultrasonography, a 47x27 mm cystic mass was found at the same localization in the magnetic resonance imaging of the neck (branchial cleft cyst?), and the FNAB was reported as non-diagnostic. The pathological examination result of the excisional biopsy material, which was applied by the ear, nose and throat clinic, was reported as cystic papillary malignant epithelial tumor infiltration (thyroid papillary Ca metastasis?). Detailed thyroid ultrasonography and positron emission tomography of the patient did not reveal primary tumor focus in the thyroid. Total thyroidectomy and left modified radial neck dissection were applied to the patient. The result of pathological examination was reported as thyroid micropapillary carcinomas (3 mm in the left lobe) and 20 lymph nodes removed were reported as reactive. Radioactive iodine treatment was planned for the patient who was discharged without any postoperative problem.

**Conclusion:** In the etiology of cystic masses in the neck, metastases of many tumors, mainly gastrointestinal system, and primary tumors of that region (sarcoma, lymphoma) are included in addition to benign diseases such as branchial cysts and dermoid cysts. Occult thyroid cancers should also be considered in the differential diagnosis and should be investigated in detail to avoid from time loss and multiple surgeries. Its treatment includes surgery, radioactive iodine therapy, and close follow-up.

**Keywords:** Micropapillary thyroid cancer, occult thyroid cancer, supraclavicular cyst

## PP-0221 [Endocrine Surgery]

# Adrenal Giant Pheochromastoma: Laparoscopic Adrenalectomy

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Pheochromocytoma is a rare chromaffin cells-derived tumor from the group of amine precursor uptake decarboxylase (APUD), which is characterized by the excessive ketacholamine secretion and detected at the rates of 0,3-0,9% according to the autopsy series. More than 90% of these tumors have adrenal localization and almost all of those with extra-adrenal localization originate from the Zuckerkandl organ. Its main clinical findings include paroxysmal hypertension, palpitation, headache and sweating. It sometimes has a more silent course and it is incidentally recognized. In this case report, we present the minimal invasive surgical treatment of a mass, which was incidentally detected in a 45-year-old female patient in the abdominal ultrasonography performed for another reason and found to be a giant pheochromocytoma on the right side in the laboratory and advanced imaging techniques, with laparoscopic transperitoneal approach. In the preoperative period, the familial syndromes that pheochromocytoma may accompany were ruled out by the endocrinology team and the patient was prepared with alpha and beta blockers to protect against the possible hypertensive crisis. After the endoscopic elimination of the liver right lobe, the right adrenal tumor was reached by entering into the retroperitoneal area via transperitoneal route with 4 trocars in the left decubitus

position. The adrenal vein was cut after closing by double folding with plastic and metallic clips. Adrenal arteries were sealed with an energy device and dissected. The mass which was totally excised without opening the capsule and touching was taken into the protective bag and taken out of the abdomen through the prepared suprapubic mini laparotomy field. The specimen dimensions were measured as 13x11 cm. The patient, who had no postoperative problem, began taking oral food in the evening of the surgery and was discharged on the 2nd day. In the follow-ups of the patient, the need for analgesia was at minimal level. Although a scale was not used, her surgical satisfaction was observed to be very high. The use of minimally invasive methods in adrenal surgery has become increasingly widespread and it is seen in the literature that the size of excised mass is increasing gradually with these methods. The adenoma size of our patient is one of the largest pheochromocytomas in the literature and we think that even if the hormone is excessively active and large in size, these patients should be given the chance to benefit from minimally invasive surgery.

**Keywords:** Giant pheochromocytoma, adrenal tumor, transperitoneal laparoscopic adrenalectomy

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## PP-0222 [Endocrine Surgery]

# Is Nerve Monitoring Necessary in Bilateral Total Thyroidectomy?

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**Objective:** We aimed to indicate that nerve monitoring is not very useful when total thyroidectomy is performed in experienced centers.

**Material and Methods:** 100 patients who underwent bilateral total thyroidectomy between 2010 and 2017 were included in the study. These patients were reported to have multinodular goiter in ultrasonographic examinations. It was also noted that the sizes of the nodule and thyroid were approximately the same. Nerve monitoring was used in half and not used in the other half.

**Results:** In the group not used nerve monitoring, transient hoarseness was detected in 2 patients and hypocalcemia, which recovered 6 months after, was found in 4 patients. In the patients who underwent the nerve monitoring, transient hoarseness was observed in 2 patients and hypocalcemia that recovered in the 9th month was found in one patient. The time was found to be longer in patients undergoing nerve monitoring. Nervous Recurrence was observed in both groups and the operations were continued. In nerve monitoring, the signal received without viewing the nerve was observed to be not very effective. Also, it was seen that there was no benefit when the intubation tube was not applied by following the instructions written on it or when excessive dose of muscle relaxant is administered. These patients were not included in the study.

**Conclusion:** We suggest that the use of nerve monitoring is not important in experienced centers, but only a material damage. We think that bilateral total thyroidectomy should be performed by experienced surgeons.

**Keywords:** Bilateral total thyroidectomy, thyroidectomy complications, nerve monitoring

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## PP-0223 [Endocrine Surgery]

# Is Surgery without Follow-Up Possible in Micropapillary Thyroid Cancer? Five-Year Follow-Up of an Anesthesiologist without Surgery

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**Introduction:** The incidence of thyroid papillary carcinoma is increasing in our country as worldwide. Cases of micropapillary carcinoma smaller than 1 cm are commonly encountered in our daily practice and they constitute 40% of all thyroid papillary carcinomas. While the current guidelines for thyroid micropapillary carcinoma recommend lobectomy or total thyroidectomy according to the patient's risk status, the American Thyroid Association (ATA) guideline states that close follow-up of these patients without surgery can be offered as an option to the patients. Therefore, we aimed to present the results of a patient who had been diagnosed with thyroid micropapillary carcinoma 5 years ago and followed up without surgery and to seek an answer to the question 'can we make close follow-up a part of our clinical practice in micropapillary carcinoma patients?'

**Case:** A 45-year-old female anesthesiologist patient. Five years ago, a 10x4x4 mm hypoechoic solid nodule with irregular margins, containing millimetric calcifications, had been detected in the thyroid left lobe anterior segment in the thyroid ultrasound performed for control. Pathological lymph nodes were not detected in the central and lateral neck lymph nodes. The result of fine needle aspiration biopsy taken from the nodule was reported as thyroid papillary carcinoma. The patient, who did not accept surgical treatment, was followed up for 6 months. No changes in the size and characteristic of the nodule were observed during the 5-year follow-up. In the last USG, the nodule size was determined as 5.4x3.9x6.7mm.

**Conclusion:** Nowadays, the wider use of ultrasonography in clinical practices and technological developments in ultrasonic resolution have increased the diagnoses of micropapillary carcinoma, which would perhaps be clinically silent lifetime, and associated surgical procedures. Nevertheless, the prevalence of papillary microcarcinomas with a silent course ranges from 30 to 40% in autopsy series. The hypothesis on the follow-up without surgery in thyroid micropapillary carcinomas was introduced into the literature by Miyauchi in the 1990's. In observational studies performed subsequently, it was found that only 7% of these patients had increased tumor size in 10-year follow-up and only 1% of the patients had a new metastatic lymph node in the follow-up. No distant metastases were detected in any patient. Another study comparing non-surgical follow-up with total thyroidectomy revealed that the costs of the follow-up patients were 4.1 times lower and the quality of life was better. However, it is difficult in our country to get a cancer-diagnosed patient to overcome his/her anxiety and fears and to follow the patient without surgery. Nevertheless, we believe that properly selected patients with micropapillary thyroid carcinomas can be followed up without surgery, with an effective patient-physician relationship and under appropriate conditions, and we suggest that further prospective multi-center studies should be initiated on this subject.

**Keywords:** Follow-up without surgery, thyroid micropapillary carcinoma, surgery

## PP-0224 [Endocrine Surgery]

# Factors Affecting Complications in Thyroid Surgery: Experience of Ankara Numune Training and Research Hospital, Breast-Endocrine Surgery Clinic

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**Objective:** Thyroid gland diseases are the most frequently surgically treated group of diseases among the endocrine organs. Complications in thyroid surgery are known to increase especially in operations performed due to toxicity, recurrence and malignancy. The most common complications after thyroid surgery are nerve injuries, hypocalcemia, bleeding, wound site infection, and surrounding organ and vascular injuries. The aim of this study is to determine the factors affecting the complications developing after thyroid surgery.

**Material and Methods:** In this study, 1035 cases of thyroidectomy in Ankara Numune Training and Research Hospital Department of Breast-Endocrine Surgery between June 2015 and May 2017 were retrospectively evaluated in terms of postoperative complications. The effects of age, gender, operation indications, histopathological diagnosis, the presence of malignancy, the presence of recurrence, the presence of toxicity, retrosternal extension, history of preoperative FNAB, nerve monitor usage, and surgical type on morbidity were investigated.

**Results:** The study included a total of 1035 patients and the female/male ratio was 3,55/1. The age range was between 17 and 87 years. 386 cases (37.4%) with neoplasia, 235 cases (22.8%) with toxic goiter, 53 cases (5.1%) with recurrence, 3 cases (0.3%) with retrosternal extension and 358 cases (34.7%) with multinodular/nodular goiter were operated. Bilateral total thyroidectomy was performed in 943 cases (91,5%), complementary thyroidectomy in 59 cases (5,7%), lobectomy/isthmectomy in 27 cases (2,6%), bilateral near total thyroidectomy in 3 cases (0.3%), and unilateral near total/contralateral total thyroidectomy in 3 cases (0.3%). Hypocalcemia developed in 143 cases (13.8%), 11,8% of which were temporary and 2% were permanent. Malignant and toxic cases were identified as the most risky group of temporary and permanent hypocalcemia. In 43 cases (4.1%), the nervus recurrence injury was seen. It was temporary in 37 cases (3.6%) and permanent in 6 cases (0.6%). In 3 cases, bilateral nerve injury developed and tracheostomy was opened in the postoperative period. It has been determined with the present data that the patients undergoing malignant and neck dissections, patients with thyrotoxicosis, and patients with retrosternal extension have high risk for the occurrence of permanent nervus recurrence injury. In 100 cases having malignancy, recurrence and retrosternal extension and undergoing nerve monitoring, there were 5 cases of nervus recurrence injuries. Of 341 cases in the same patient group, who were not applied nerve monitoring, 38 cases had nervus recurrence injury. Complication rate was found to decrease significantly in patients undergoing nerve monitoring ( $p<0.05$ ). In 4 cases (0.38%), bleeding developed in the early postoperative period and they were reoperated. Two cases had esophageal injuries and 2 cases had tracheal injuries. Seroma developed in 12 cases and wound site infection in 1 case.

**Conclusion:** Although thyroid surgery is mostly performed for benign reasons, severe morbidities are encountered postoperatively. That's why, especially in cases with malignancy, recurrence, toxic and retrosternal extensions, it is important that surgical treatment is performed by experienced surgeons in high-volume centers.

**Keywords:** Neck dissection, hypocalcemia, nerve injury, thyroidectomy

## PP-0225 [Endocrine Surgery]

# Minimally Our Experience on Invasive Parathyroidectomy: Analysis of a Five-Year Period

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**Objective:** To share our minimally invasive surgical experience for parathyroid lesions localized by imaging methods in cases referred to our clinic with the diagnosis of primary hyperparathyroidism.

**Material and Methods:** Patients operated with minimally invasive method due to the pre-diagnosis of parathyroid adenoma between January 2012 and December 2017 were retrospectively evaluated by examining the demographic data, preoperative laboratory and imaging methods, surgical findings, histopathological reports, complications, and secondary interventions. The preoperative and postoperative changes in the values of parathormone (PTH) and calcium (Ca<sup>2+</sup>) were evaluated by the Wilcoxon test.

**Results:** The mean age of the 216 patients who underwent minimally invasive parathyroidectomy was 55.7 (25-84) years and the preoperative mean PTH was 321.8 pg/ml (49-5000), Ca<sup>2+</sup> was 11,3±0,8 mg/dl, and phosphorus (PO<sub>4</sub>) was 2,8±0,4 mg/dl. In the ultrasonographic examination, adenoma was suspected in 37.5% (n=81) of the cases. In 66 cases, adenoma was localized with Sestamibi scintigraphy. Localization was determined with neck magnetic resonance in 13 cases and with neck computed tomography in one case. Selective venous sampling (SVS) was required for localization in 59 cases. Minimally invasive parathyroidectomy (MIP) was performed in 154 cases and video-assisted MIP in one case. In 30 cases, parathyroid adenoma excision with lobectomy or thyroidectomy was performed due to additional pathology. And the exploration of 4 glands was performed in 31 cases. The mean incision size was 1.9±0.6 cm and the mean duration of operation was 41.2±6.7 minutes. In 5 cases, additional imagings were carried out because of high levels of PTH and Ca<sup>2+</sup> in their controls. For these cases, secondary intervention was required due to the presence of findings consistent with intrathoracic (in 2 cases) and cervical (in 3 cases) parathyroid adenomas. In one case of intrathoracic localization, adenoma was removed mediastinoscopically with the department of thoracic surgery. For the other patient who was not operated yet, VATS was planned in cases with cervical lesions, adenomas were excised with gamma probes. Persistence developed in three cases. These cases having high PTH values but being normocalcemic are still being followed in the outpatient clinic. In the postoperative period, transient hoarseness occurred in 2 patients. In one patient previously performed percutaneous alcohol injection, hemorrhage developed on the first postoperative day and this patient was re-operated for hemostasis. In the 3rd week control examination, the mean value of PTH was 41.8 pg/mL (3-528) and Ca<sup>2+</sup> was 9,1±0,8mg/dl (p=0.03, p<0.001, respectively). The results of the histopathological evaluation were found to be consistent with parathyroid adenoma.

**Conclusion:** In our clinic where techniques such as marking with gamma probe are now routinely used, the results obtained with MIP are increasing compared to the first years and the rates of morbidity and secondary interventions are decreasing by the virtue of increased number of cases and experience with a multidisciplinary approach.

**Keywords:** Hyperparathyroidism, parathyroid adenoma, minimally invasive parathyroidectomy

## PP-0226 [Endocrine Surgery]

# Examination of Paraganglioma Case Seen After Papillary Thyroid Carcinoma with Video

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**Introduction:** It was aimed to present the detection of paraganglioma at the level of aortic bifurcation in the follow-ups of a patient who had been operated for papillary thyroid cancer previously in our clinic and its laparoscopic excision with video images.

**Case:** We wanted to demonstrate in the video record that an approximately 5 cm paraganglioma at the level of the aortic bifurcation on the iliac veins can safely be removed with laparoscopic approach. We also aimed to demonstrate that, in these types of masses located on important structures, the problems that could develop in association with dissection difficulty due to adhesions in that region and manipulation especially in functional masses could be overcome in experienced centers and we wanted to share our experience in our clinic. In the video, dissection technique, strategies for coping with dissection difficulty, and the strategies that could be applied when complications such as bleeding occurred were presented.

**Conclusion:** The coexistence of paraganglioma and papillary thyroid cancer is rarely reported in the literature. It is difficult to determine whether this coexistence is incidental or genetic predisposition, and it is specified to be associated with many different mechanisms. As in our case, laparoscopic approach is suitable in rare cases of neurogenic tumors and it is preferable method due to its shorter duration of hospitalization.

**Keywords:** Papillary thyroid carcinoma, paraganglioma, laparoscopic excision

## PP-0227 [Endocrine Surgery]

# Use of Plasmapheresis for Preoperative Preparation of Patients with Thyreotoxicosis

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**Objective:** The accurate choice of treatment for diffuse toxic goiter is one of the actual problems of clinical endocrinology. In thyreostatic treatment, 20% of patients cannot tolerate the therapy or have drug resistance and 47% have recurrence. The most radical treatment is surgery, which leads to healing in 80-90% of the cases. The results of surgical treatment mostly depend on the quality of preoperative preparation. For all patients, preoperative preparation is essential for reducing the possibility of intraoperative and postoperative serious complications. One role of preoperative preparation is to provide euthyroidism. In preoperative preparation methods, euthyroidism is temporary, generally ineffective. Plasmapheresis is recommended for increasing the quality of drug therapy and preoperative preparation. In this study, it was aimed to determine the effect of plasmapheresis on reducing the time of preoperative preparation.

**Material and Methods:** Eleven patients operated for toxic goiter in our clinic between February 2017 and December 2017 were retrospectively evaluated. The values of Serum TSH, free T4, and free T3 were analyzed before and after plasmapheresis. In the study, discontinuous plasmapheresis was used. Plasmapheresis was performed with the "Haemonetics" PCS2 device, with LN625 B/1 m NALL program. The procedure was performed twice at 3-day interval.

Eritromat in the extract and centrifuged serum were separated. The form elements were mixed with 50-80 ml solution. The amount of blood in total time was 1980 ml, the amount of serum in each session was 652 ml, and the duration of the procedure was 88 minutes. After the completion of the procedure, IV Ringer 500 ml and 4 mg dexamethasone were administered.

**Results:** Of the patients, 9 were female and 2 were male. Their mean age was 28,34±16.63 years. The patients were divided into two groups: those given preoperative thyreostatics (6 patients) and those applied both thyreostatics and plasmapheresis (5 patients). Plasmapheresis is well-tolerated by the patients and it does not have serious complications. In Graves patients, plasmapheresis allows to reduce the signs of hyperthyroidism in the preoperative preparation and it is more effective in improving thyroid dysfunction. The duration of preoperative preparation was shorter in Group 2 than in Group 1 (15,4±3,4 days). And, the side effects of thyreostatic drugs did not develop and serious postoperative complications did not occur. Plasmapheresis decreases the time of preoperative preparation by 1,5-2 times in DTG patients and postoperative complications including thyroid crisis. It is not against the other complex therapy methods.

**Conclusion:** We think that plasmapheresis can be applied successfully in the preoperative period for diffuse toxic goiter particularly in selected patients.

**Keywords:** Diffuse toxic goiter, plasmapheresis, thyreostatic

## PP-0228 [Endocrine Surgery]

# Does the Risk of Hypocalcemia Increase in Complementary Thyroidectomy Performed for Papillary Thyroid Cancer?

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**Objective:** Thyroid nodules rarely have thyroid malignancy in the pathologic examination, and complementary thyroidectomy may be required for the opposite lobe after lobectomy for the cytologic results in the categorical group that does not have a definite diagnosis in preoperative fine needle aspiration biopsy. Hypocalcemia is the most common complication after thyroidectomy. Whether complementary thyroidectomy increases the risk of developing hypocalcemia compared to total thyroidectomy remains controversial. In this study, we aimed to evaluate whether the application of complementary thyroidectomy with the diagnosis of papillary thyroid carcinoma (PTC) increases the risk of hypocalcemia compared to total thyroidectomy.

**Material and Methods:** The data of patients who were diagnosed with papillary thyroid carcinoma (PTC) preoperatively or postoperatively and operated between 2014 and 2017 were retrospectively evaluated and 2 patient groups were formed. After performing lobectomy in the first surgery, 19 patients who were found to have PTC in the pathological examination and were performed complementary thyroidectomy on the opposite lobe were included in Group 1. Of the patients who underwent total thyroidectomy with preoperative diagnosis at the same period, 53 patients with similar characteristics to Group 1 in terms of age and gender were selected for Group 2. Biochemical parameters related to calcium metabolism in preoperative and postoperative period, parathyroid autotransplantation and involuntary removal of the parathyroid gland, postoperative hypocalcemia and treatment rates were compared between the two groups.

**Results:** Group 1 and Group 2 included 19 patients (13K, 6E) with the mean age of 48.3+12.1 years and 53 patients (40K, 13E) with the mean age of 46.3+9 years, respectively. There was no significant difference between the groups in terms of age and gender. No significant difference was found in terms of preoperative parathormone (PTH), phosphorus (P), magnesium (Mg), alkaline phosphatase (ALP), vitamin D deficiency ratio, parathyroid autotransplantation and the presence of parathyroid gland in thyroid specimen. Preoperative calcium (Ca) value was 9.33+0.46 in Group 1, which was lower than in Group 2 (9.65+0.41) (p=0.012). There was no significant difference between the values of postoperative 0th day Ca, P, Mg, PTH and postoperative 1st day Ca, P, Mg, PTH. The postoperative 1st day P level was significantly lower in Group 1 (2.86+0.72) than in Group 2 (3.6+0.83). The rates of postoperative hypocalcemia were 21.1% and 30.2% in Group 1 and 2, respectively, and the difference was not statistically significant (p=0.558). Hypocalcemia was temporary in both groups and no permanent hypoparathyroidism was detected. Postoperative Ca and sometimes active vitamin D application rates were 10.5% in group 1 and 22.6% in group 2 and there was no significant difference between the groups in terms of getting treatment (p=0.327).

**Conclusion:** Complementary thyroidectomy does not increase the risk of hypocalcemia compared to total thyroidectomy. Complementary thyroidectomy can also be performed with similar complication rates to total thyroidectomy. Postoperative follow-up and treatments of these patients are similar to those of patients undergoing total thyroidectomy.

**Keywords:** Hypocalcemia, papillary thyroid carcinoma, complementary thyroidectomy

## PP-0229 [Endocrine Surgery]

# Laparoscopic Adrenalectomy: Experience at Ondokuz Mayıs University

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**Objective:** In this study, we aimed to present the surgical experience of our clinic in the treatment of adrenal masses.

**Material and Methods:** In this study, 94 patients who underwent laparoscopic or open transabdominal adrenalectomy in the Department of General Surgery at Ondokuz Mayıs University School of Medicine between January 2007 and January 2018 were evaluated retrospectively.

**Results:** Twenty (21%) of the patients were male and 74 (79%) were female. The mean age was 42 (19-70) years. Of the cases, 44 (47%) underwent right adrenalectomy, 39 (41%) left adrenalectomy, and 11 (12) bilateral adrenalectomy. The mean follow-

up period was 61 months. While the number of functional adrenal masses was 63 (67%), 31 (33%) patients had nonfunctional masses. Thirteen (14%) cases were performed open transabdominal adrenalectomy due to various reasons (previous abdominal surgery, giant adrenal mass, etc.). In 4 (4%) cases, the operation was started as laparoscopic but switched to open surgery due to some reasons such as intraoperative bleeding and adhesions. On the other hand, 77 (82%) cases underwent laparoscopic adrenalectomy (LA). The rate of conversion to open surgery was calculated as 5% (4 vs. 81). Intraoperative blood replacement was performed in 5 patients, whereas blood replacement was applied in 4 patients because of hemorrhagic fluid coming out from the drain in the postoperative period despite the absence of intraoperative bleeding. Intraoperative diaphragm injury developed in one patient and laparoscopic diaphragm repair was performed. In the intraoperative and postoperative periods, 13 (13.8%) cases had minor complications that did not cause mortality. In 3 of the cases developing complications, the operation was started as laparoscopic and then switched to open technique. In 5 cases, open technique was directly performed. Of the 13 cases developing complications, 3 were pathologically malignant while others were benign. Considering the distribution of complications according to years, no complication was observed except for 2 patients developing postoperative bleeding recovered by replacement in the last three years. The mean duration of postoperative hospitalization was 5.9 (3-12) days in the patients undergoing open transabdominal adrenalectomy and 3.4 (1-8) days in LA patients. With regard to the pathological results, while 8 (8.5%) patients were diagnosed as malignant (adrenal cortical carcinoma, metastasis, etc.), 86 (91.5%) patients were diagnosed as benign (Cortical adenoma, oncocytoma, ganglioneuroma etc.).

**Conclusion:** In recent years, laparoscopic surgical treatment of the adrenal gland has been successfully performed as a result of technological and technical developments in laparoscopic surgical instruments and radiological imaging of the organs for the diagnosis of adrenal diseases. The superiority of LA over the open technique has been defined in many aspects (short hospitalization, low postoperative pain, rapid recovery, etc.). According to our results, there was no correlation between the malignancy of adrenal mass and development of complications. Again, the decline in complication rate in the last two years shows that LA is a safe method when performed by experienced surgeons.

**Keywords:** Laparoscopic adrenalectomy, open adrenalectomy, adrenal mass

## PP-0230 [Endocrine Surgery]

# Problems that May be Encountered in Persistent Primary Hyperparathyroidism Surgery After Alcohol Ablation

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**Introduction:** To discuss the problems that can be encountered in surgical intervention performed due to persistent disease and pathologic reporting in patients undergoing alcohol ablation for the treatment of parathyroid adenoma (PTA).

**Case:** In the analyses of a 57-year-old female patient performed due to urolithiasis, the value of calcium (Ca) was 14.8 mg/dL, PTH was 2773 pg/mL and 24-hour urine Ca was 533 mg/day. Therefore, she was taken under observation in the department of general surgery with the pre-diagnosis of primary hyperparathyroidism (PHPT) on 22.05.2017. In the ultrasonography (USG), a 22x11 mm solid lesion consistent with PTA in the neighborhood of the inferior part of the left thyroid gland was observed. The MIBI imaging revealed an involvement that was found to be consistent with parathyroid pathology in the same lodge. After hydration, Ca and PTH values were regressed to 11.5 mg/dL and 1050 pg/mL, respectively. Because the patient did not accept the operation, percutaneous alcohol ablation (PAA) was planned. Before ablation, Magnetic Resonance Imaging (MRI) of the neck and biopsy were performed in order to rule out malignancy. In the neck MRI, invasion to the surrounding tissues, which might be in favor of malignancy, was not observed. In the cytological evaluation, epithelial cells without malignancy were evaluated to be consistent with proliferative parathyroid lesion. After biopsy, the patient developed a hematoma involving the left side of the whole neck and extending to the bilateral nipples. On 29.05.2017, PAA procedure with 3cc ethanol injection into the lesion was performed by the interventional radiology. No complication except pain was observed. After the procedure, PTH was found to be 799 pg/mL and Ca was 9,6 mg/dL. An additional session of PAA was planned for the patient and she was discharged by directing to the hematology department for the investigation of hemorrhagic diathesis. The patient was hospitalized due to persistent disease on 03.01.2018 (Ca: 16,1mg/dL, PTH: 1605pg/mL). In USG, a 39x15x14 mm hypoechoic nodular lesion with unclear margins was observed in the PTA lodge applied ablation. In MIBI, an involvement consistent with PTA was detected. On 10/01/2018, the values of PTH and Ca were regressed to 998 pg/mL and 10,4 mg/dL, respectively, and the decision of surgery was made. The left lobe of the thyroid was reached with anterior cervical incision and it was observed that the lower pole was severely adhered to the surrounding tissues. The liquefied gray-yellow colored, partially encapsulated tissue in the posterior area was separated from the paratracheal groove, the anterior

side of the esophagus, pre-vertebral fascia and carotid artery with the guidance of neuromonitorization and it was removed as en bloc with partial thymectomy. Postoperative value of Ca was 7,5mg/dL and PTH was 267pg/mL. Because of the development of hematoma following the removal of drain, emergency hematoma drainage was performed. The patient with no additional complication was discharged by consulting to the department of hematology. No hemorrhagic diathesis was detected in the preliminary hematological examinations. Although lymphovascular invasion in the parathyroid tissue, thick fibrous band and capsule invasion suggested carcinoma in the histopathological examination, the patient was not accepted as malignant because the mitotic index was 1/50 BBA and Ki-67 index was 5% and she was closely followed up.

**Conclusion:** Although alcohol ablation in PTA is not a highly preferred method because of causing severe pain and frequent and early recurrence, successful results have been reported in repeated applications. The necrotizing effect of alcohol is seen not only in PTA but also in the surrounding tissues. In addition, it makes surgical procedures for the persistent disease more difficult and can be confused with malignancy in the pathological evaluation.

**Keywords:** Primary hyperparathyroidism, parathyroid adenoma, alcohol ablation

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## PP-0231 [Endocrine Surgery]

# Laparoscopic Surgical Treatment of Giant Adrenal Mass

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**Introduction:** Adrenal masses, which are often detected incidentally and not exceeding certain dimensions, are frequently encountered. Our aim is to share our experience in this area by explaining the approach to a rarely encountered adrenal mass with a size of 10 cm and above and its surgical treatment.

**Case:** In the result of the whole abdominal USG taken for the examination of the left side pain radiating to the back, a solid tumoral mass of approximately 7x9 cm was found in the upper pole of the left kidney. With this result, the patient consulted to the department of urology and underwent the tomography of the abdomen. As a result of the tomography, the mass recognized in the USG was detected to have surrenal origin and she was referred to our department.

**Conclusion:** In the left adrenal gland lodge, a well-demarcated cystic necrotic mass with a size of 95x70 mm and with numerous vascular structures was observed (pheochromocytoma? adrenal carcinoma?). The mass caused a mild compression in the superior area of the kidney. The patient consulted to the outpatient clinic of general surgery with the report of tomography. The consultation to the department of endocrinology was requested in order to distinguish whether the adrenal mass was functioning or not. In order to be able to examine the mass in more detail, surrenal MR was requested and preoperative preparations were started.

As a result of the endocrinology consultation, the mentioned mass was considered to be an inactive but preop, perop and postop functioning adenoma according to its size, and the related measures and medical treatment were recommended. The result of surrenal MR: A well-demarcated 93x68x110 mm cystic degenerative mass was observed in the left adrenal gland. The patient's preoperative preparations were completed and she was taken into operation by considering the recommendations of the endocrinology department. As seen in the pictures, the patient was inserted 3 trocars and then an extra trocar for elimination. Laparoscopically, the mass was separated from the splenic flexure, spleen, and abdominal wall, usually with the aid of harmonics. After the medial dissections were performed, the adrenal vein was viewed. The diameter of the adrenal vein was increased in proportion to the size of the mass. It was thought to be confused with the renal vein, and after making sure that the mass was entered, the anesthesia team was informed and the mass was excised after clipping with hemoclips. The mass was removed out of the abdomen as a single piece by expanding the trocar site. After the hemostasis, one drain was placed into the abdomen and then the abdomen was closed.

The patient, who was discharged after removing the drain on the postoperative 3rd day, had no active complaints on the postoperative 10th day. Her sutures were taken and now, her pathological reports are being waited.

**Keywords:** Giant, laparoscopic, surrenal

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## PP-0232 [Endocrine Surgery]

# Epidermoid Cyst with Intrathyroidal Localization

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**Introduction:** The thyroid is an organ in which metastatic tumors such as neoplastic and non-neoplastic lesions are also frequently seen. Because the thyroid gland normally does not include squamous cells, the presence of cystic tumors, which are



known as epidermal cysts, surrounded by keratinized squamous epithelium and filled with keratin debris is not an expected pathology. Squamous cell carcinomas of the thyroid are mostly metastatic and they can also occur as primary tumor. In this study, we aimed to present a case of epidermoid cyst mimicking squamous cell carcinoma of the thyroid.

**Case:** A 43-year-old female patient was admitted to our outpatient clinic because of a palpable swelling in the midline of the neck one month ago. In the thyroid USG, a 8\*5 mm thyroid nodule with hypoechoic internal structure was detected in the right lobe isthmus junction. Thyroid function tests and other laboratory parameters of the patient were determined to be within normal intervals. Thyroid fine needle aspiration cytology (TFNAC) was performed. The result was reported as squamous cell carcinoma (SCC). Therefore, PET-CT was performed in the patient. No other tumor focus was detected. The patient was operated with the diagnosis of thyroid primary SCC and the patient underwent total thyroidectomy. The patient who did not have postoperative complication was discharged on the second postoperative day. The pathologic examination of the patient's thyroid specimen revealed a cystic structure lined with reactive regenerative squamous epithelium and it was recognized that the morphology, which was observed to be multicystic in the first evaluated sections and to have local invasions on the thick fibrous wall, was actually a single cyst in the serial section analysis. With these findings, the case was reported as an epidermoid cyst.

**Conclusion:** Although dermoid and epidermoid cysts can be seen in the head and neck region up to rate of 7%, they are not found in the thyroid tissue in normal conditions. The most widely accepted view on the formation of epidermal cyst with thyroid localization is that it is formed by surrounding epithelial tissue residues during the closure of the first and second branchial arches at the midline in the third and fourth weeks of intrauterine life. In addition to ultrasonographic evaluation of thyroid cystic masses, thyroid fine needle aspiration cytology (TFNAC) is a reliable diagnostic method. Although our case was reported to have squamous cell carcinoma according to the result of TFNAC, epidermoid cyst diagnosis was established in pathological examination by using histochemical methods. In the differential diagnosis of thyroid cystic lesions, epidermal cysts should also be kept in mind and the limitations of TFNAC should be considered in the histologic diagnosis of these lesions.

**Keywords:** Epidermoid cyst, thyroid SCC, total thyroidectomy

## PP-0233 [Endocrine Surgery]

# Investigation of Clinical Decision Efficiency of Ultrasonography and Needle Biopsy in Thyroid Surgery

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**Objective:** Today, the evaluation and follow-up of thyroid nodules are performed through ultrasonography (USG) and fine needle aspiration biopsy (FNAB). The aim of this study was to investigate the importance of ultrasonography and FNAB in the clinical evaluation and surgical planning of thyroid surgery.

**Material and Methods:** In a tertiary university hospital, 699 thyroid cases undergoing surgery between 2012 and 2016 were retrospectively evaluated. In addition to the demographic features of the cases, preoperative USG results and FNAB results if available, type of surgery performed and final pathology results were noted. The consistency of the FNAB performed under the guidance of USG with the pathological report was evaluated. In addition, the characteristics of thyroid surgery types and USGs performed for 4 years were given.

**Results:** Of the patients undergoing thyroid surgery, 82% (n=573) were female and 18% (n=126) were male. The median age was 48 (14-111) years in males and 44 (11-84) years in females. Of 683 patients that were performed preoperative thyroid USG, 61.7% (n=431) were diagnosed with multi-nodular goiter (MNG), 15.9% (n=111) with Toxic MNG, 14.4% (n=101) with Solitary nodule, 5.6% (n=39) with Graves, and 0.1% (n=1) with MNG plus parathyroid adenoma. With regard to the results of FNABs, it was detected that 34.3% (n=240) were operated without biopsy (no biopsy indication), 22.0% (n=154) had "benign cytology", 10.7% (n=75) had "suspected malignancy", 10,6% (n=74) had atypia of undetermined significance/follicular lesion of undetermined significance (AUS/FLUS), 10% (n 70) were "non-diagnostic", 7,6% (n=53) had malignancy, and 4.3% (n=30) had follicular neoplasia/suspected follicular neoplasia (FN/SFN). The most common operations were found to be bilateral total thyroidectomy with the rate of 56.1% (n=392) and unilateral lobectomy with the rate of 15.1% (n=102). By taking the final pathological result as the gold standard, the sensitivity and specificity of FNAB in the malignant/benign differentiation were found to be 74.2% and 64.0%, respectively. It was observed that the patients with the USG-guided FNAB result of malignancy, suspected malignancy, AUS/FLUS, and FN/SFN were mostly recommended surgery, and the patients with non-diagnostic or benign results were recommended follow-up or repeated biopsy. In the surgeries performed with this approach, the overall accuracy rate was detected to be 68%.

**Conclusion:** We think that only FNAB and USG are not enough to decide and a good clinical evaluation and physical examination should be combined with the results of radiology and cytology to make a surgical decision.

**Keywords:** Thyroidectomy, ultrasonography, fine needle aspiration biopsy

## PP-0234 [Endocrine Surgery]

# Assessment of Thyroid Nodules by ‘Diastolic Sonoelastographic Strain Index’

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**Objective:** In our study, we aimed to determine whether the strain index detected by sonoelastographic manual compression of the carotid artery synchronous with the diastolic period was useful in assessing thyroid nodules.

**Material and Methods:** In our study, 289 nodules of 260 thyroid nodule patients were prospectively examined. For each lesion, B-mode sonography and sonoelastography images were taken. The strain indices for nodules were calculated by using the normal-appearing thyroid region as reference. The results were compared with histopathological or fine needle aspiration biopsies. The diagnostic performances of both the obtained strain index values and the B-mode sonography were determined.

**Results:** The mean strain index value was  $1.52 \pm 2.43$  (0.49-29.70) for 268 benign thyroid nodules and  $4.94 \pm 3.96$  (1.28-47.60) for 21 malignant nodules. While the sensitivity and specificity for B mode sonography were calculated as 88% and 80%, respectively, they were 75% and 93% for strain index method.

**Conclusion:** Sonoelastography, in which strain index with the manual compression of the thyroid nodules synchronous with the diastolic period of the carotid artery is determined, can be a method increasing the specificity in the evaluation of thyroid nodules, but its diagnostic performance is not better than the B-mode sonography.

**Keywords:** Thyroid nodules, sonoelastography, strain index

## PP-0235 [Endocrine Surgery]

# Prospective Evaluation of Perioperative Factors for the Prediction of Hypocalcemia After Total Thyroidectomy

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**Objective:** Hypocalcemia after thyroid surgery is an early complication seen at the rate of 1-50%. For the early detection of this complication, perioperative parathyroid hormone (PTH), calcium, and phosphorus levels are most frequently evaluated. In our study, it was aimed to investigate the effects of serum PTH, calcium, phosphorus and fibroblast growth factor-23 (FGF-23) levels on the recognition of early hypocalcemia which may develop after total thyroidectomy.

**Material and Methods:** The data of 57 patients (including 52 patients with multinodular goiter, 3 patients with Grave's disease and 2 patients with papillary thyroid cancer) who were performed total thyroidectomy between April 2009 and March 2010 were recorded prospectively. The levels of serum PTH, calcium and phosphorus were measured before the surgical procedure. Ten minutes after the removal of the thyroid gland, a second sample for PTH was taken after resection while the patient was still in the operating room. The relative difference (PTH reduction) between the PTH values before and after excision was calculated. The relative decrease or PTH reduction percentage of PTH was calculated as follows:  $[(\text{Preoperative PTH} - \text{Postresection PTH}) / \text{Preoperative PTH}] \times 100$ . PTH, calcium, phosphorus and FGF-23 levels were measured 24 hours after the operation. In our study, supplementation was given with only a calcium value of 7.0 mg/dL or between 7.0 and 8.4 mg/dL in the presence of clinical symptoms of hypocalcemia. Symptomatic hypocalcemia was treated with parenteral calcium and oral vitamin D (calcitriol) supplementation of 1-1.5 µg/day. The patients with symptomatic hypocalcemia were discharged with oral calcium and/or oral calcitriol. The patients were monitored weekly until their serum calcium and PTH levels returned to normal.

**Results:** The mean age of the patients was 49.4 (21-71) years and the female/male ratio was 2.8 (n:42/n:15). Seven of 57 patients (12.3%) developed postoperative hypocalcemia. Postresection PTH, postoperative PTH, calcium and phosphorus levels, and PTH reduction percentage were significantly lower in patients with hypocalcemia. There was no significant difference in the postoperative FGF-23 levels between the groups.

**Conclusion:** In order to be able to discharge patients early and to reduce the medication and hospital costs, patients who will develop hypocalcemia after total thyroidectomy need to be determined before developing hypocalcemia. We suggest that Postresection serum PTH, PTH reduction percentage and serum PTH, calcium and phosphorus measurements on the day after

the operation are the tests with high diagnostic value; their diagnostic values increase when they are evaluated with postresection serum PTH and the serum calcium levels on the next day of the operation; and serum FGF-23 measurements do not have high diagnostic value.

**Keywords:** Fibroblast growth factor, hypocalcemia, parathyroid hormone, total thyroidectomy

## PP-0236 [Endocrine Surgery]

# Adrenal Cortical Carcinoma Patient with Compression Findings

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**Case:** In the physical examination of a patient admitted due to the complaints of abdominal pain increasing within the last one month and dyspnea, tenderness was found in the left upper quadrant. Except for leukocytosis (26000) and elevated AST (640), routine hemogram and biochemical values and tumor markers were detected to be normal. The levels of ACTH (15.7), cortisol (19.5), and aldosterone (5.69) were normal. Urinary adrenaline (12.2), HVA (0.4), 5-HIAA (0.71), dopamine (448), VMA (0.7), and noradrenaline (60.0) values were normal. In the abdomen CT and MR, a well-circumscribed solid mass including cystic necrotic areas of approximately 115x100x93 mm, which displayed the pancreas body-tail section into the anterior superior area and the kidney to the posterior inferior area, was detected in the left adrenal lodge. In the exploration, a 12x12x15cm mass pushing the descending colon meso to the anterior area, the left kidney to the pelvis, and the pancreas and the spleen to the antero-superior area was detected. The mass invasive to the pancreas, left kidney, and splenic flexure was resected with as en bloc by involving the distal pancreas, the left kidney and the spleen. The pathologic examination revealed that the encapsulated 14x12x10 cm mass, which was found to be invasive to the pancreas and kidney, contained necrotic and locally light yellow areas. The mass with Vimentin (+), Synaptophysin (+), Chromogranin (+), Melan-A (+), Inhibin (+), S-100 (+), and Ki-67 index 8-10% was evaluated as adrenal cortical carcinoma.

The patient was discharged on the 10th postoperative day with recovery. The patient, who did not have systemic metastasis on PET CT, was started adjuvant radiotherapy.

**Conclusion:** Adrenal cortical carcinoma (ACC) can have a silent course until the development of compression findings because it is usually dysfunctional in the adult age group. CT and MR have 90% sensitivity in the detection of the adrenal gland. FNAB is not recommended due to its high negativity rate. Selective angiography and adrenal venography can be useful in differentiating adrenal tumors from renal tumors. Positron emission tomography (PET/CT) is useful for the detection of metastatic foci. However, the definite diagnosis can usually be established after histopathological examination. Whether the adrenal masses are hormonally functional should be investigated before surgery. Surgical resection is still the most effective treatment method in ACC and most of patients have lung and liver metastases at the time of diagnosis. The mean tumor diameter in dysfunctional ACC is 10 cm (5-40 cm). In our case, the tumor diameter was measured as 13.5 cm and R0 resection was performed. The most important prognostic factor that affects survival in ACC is the removal of the mass. While five-year survival is 65% in stage I tumors, it is reported as 0-4% in stage IV tumors. The mean survival time in tumors determined as stage IV during diagnosis is less than 12 months. Regional lymph involvement affects survival negatively. Lymph dissection is recommended for a more accurate staging.

Surgical resection is the primary treatment approach and the rates of recurrence and metastasis after resection are high. CT and RT protocols can be given as neoadjuvant therapy to make the tumor operable. The patient undergoing complete resection was given RT to prevent local recurrence. ACC is a rare tumor with poor prognosis in the adult age group. Surgical resection is the selected treatment and it is recommended even in the presence of metastatic disease.

**Keywords:** Adrenal cortical carcinoma, compression, en blok resection,

## PP-0237 [Endocrine Surgery]

# Surgical Treatment and Survival Outcomes in Patients with Primary Adrenocortical Cancer

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**Objective:** Adrenocortical cancers (ACC) are rare but aggressive tumors. At the time of admission, many cases have locally advanced tumors and poor prognostic criteria. The main treatment is complete surgical resection. There are insufficient data on the efficacy of chemotherapy and radiotherapy. In this study, we aimed to share the follow-up and results of patients performed surgical treatment for ACC.

**Material and Methods:** The records of 26 patients operated for ACC between October 1986 and November 2017 were reviewed retrospectively. All patients were evaluated by the endocrine surgery council, by at least one endocrinologist, one radiologist and one endocrine surgeon for preoperative indications. The preoperative preparations of all patients were done in the endocrinology clinic, and when they were ready, they were taken to the general surgery clinic and operated. The patients' demographic characteristics, surgical indications, surgical methods, histopathological characteristics of the specimens, complications, follow-up periods, and the characteristics of the patients who developed recurrence in the follow-up were evaluated.

**Results:** The mean age of the patients was  $44.8 \pm 15.6$  years and the female/male ratio was 12/14. The preoperative evaluation revealed that the masses of 21 patients were non-functional and the masses of 5 cases were functional (4 pheochromocytoma, 1 cushing). Sixteen patients were operated for right adrenal mass and 10 patients for left adrenal mass. Twenty-three patients underwent open surgery. The operations of 3 patients were initiated laparoscopically but it was switched to open surgery in 2 patients, in one patient because of insufficient dissection and in another due to bleeding in the mass. Splenectomy was performed in a patient, who was operated for left ACC, because of splenic injury. Twelve patients did not come for their follow-up examinations. The mean follow-up time of 14 patients who regularly visited for the controls was  $60.2 \pm 51.7$  months. During the follow-ups, 4 patients died. In the early period, pulmonary metastasis was detected in one patient and diffuse metastasis in two patients. In one patient, local recurrence occurred in the 9th year of the follow-up. For the exitus patients, the postoperative median survival was 36 (12-120) months.

**Conclusion:** Although adrenocortical cancers are aggressive cancers, disease-free survival can be achieved up to 120 months in patients undergoing early and adequate surgery. Today, surgery is among the most important treatment options. If there are no multiple distant metastases at the time of diagnosis or if they are not inoperable, curative surgery should be performed on experienced hands.

**Keywords:** Surrenal, adrenal, adrenocortical cancer, adrenalectomy, surrenalectomy

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## PP-0238 [Endocrine Surgery]

# Atypically Localized Metastasis of Thyroid Papillary Carcinoma; Gluteal Region

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**Introduction:** Papillary thyroid carcinomas (PTC) are the most common cancers of the thyroid gland. The most common metastasis occurs in the cervical lymph nodes, but distant metastases are more rarely seen. Distant metastases are most commonly observed in the lungs and then in the bones and brain. Primary treatment of the disease is surgery, and metastasis or recurrence is evaluated primarily by the measurement of serum thyroglobulin (Tg) level, ultrasonography (USG) and iodine-131 body scan in patients' follow-ups. In our case, we aimed to present the metastasis of PTC to the gluteal region, which has not been reported previously in the literature.

**Case:** A 57-year-old male patient presented with the complaints of swelling in the neck, shortness of breath, and difficult swallowing. In the examinations performed, an approximately 5 cm nodule in the left lobe of thyroid and findings consistent with PTC in the biopsy taken from this nodule were observed. The patient, who was found to have multiple pathological lymph nodes in the left cervical chain, bilateral total thyroidectomy, left central and lateral lymph node dissection were performed. In the histopathological examination of the specimen, a diffuse sclerosing variant PTC with high columnar areas in 4 foci, the largest of which was a 7 cm focus in the left lobe, was detected. The patient was directed to the Nuclear Medicine Unit for radioactive iodine ablation (RAI). The patient with Tg levels of  $>500$  was administered 250 mCi RAI. In the body screening performed after treatment, I-131 involvement increased in 2 foci in the neck and in 1 focus in the mediastinum were observed. Despite the presence of minimal I-131 involvement in the right thyroid lodge of the patient who was given a total of 750 mCi radioactive iodine treatment in the follow-ups, thyroglobulin levels were found as  $>500$ . The PET-CT performed in the postoperative 14th month revealed a lesion in the left external iliac in the lymphatic lodge, which was consistent with metastasis, and an approximately 7.5 cm hypermetabolic soft tissue lesion in the left gluteal muscle lodges. A mass was detected in the gluteal region and the patient was referred to our clinic again. A true-cut biopsy was performed from this area and findings consistent with PTC metastasis were detected. The patient was re-operated 19 months after the first surgery and a gluteal mass excision was performed. In the pathological evaluation, PTC metastasis was found.

**Conclusion:** Although PTC is a carcinoma generally with a good prognosis and it mostly causes metastasis through lymphatic way, atypical hematogenous metastases are seen although rare. Patients with advanced stage PTC, who have a high risk of

distant metastasis, should be evaluated by performing body scanning after RAI treatment. The presence of atypical metastasis should be assessed by different methods such as PET-CT in patients with inconsistency between thyroglobulin levels and the amount of residual tumor detected in body scan. Surgical treatment should be the first choice for these types of metastatic lesions.

**Keywords:** Papillary thyroid cancer, thyroidectomy, metastasis,

## PP-0239 [Endocrine Surgery]

# Retrospective Evaluation of Patients Undergoing Surgical Treatment Due to Primary Hyperparathyroidism

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**Objective:** Primary hyperparathyroidism is the most common disease of the parathyroid gland. The preferred treatment is surgical excision. With the increased reliability of localization studies in recent years, minimally invasive surgery has begun to be the preferred surgical procedure. Parathyroid surgery is difficult to manage due to both the difficulty of finding it and recurrences that may develop even after appropriate surgery. Our aim in this study is to evaluate the results of our own series and to investigate the presence of any changes in our surgical practice.

**Material and Methods:** The patients who underwent surgery for primary hyperparathyroidism between January 2012 and September 2017 were included in this study. Patients' demographic characteristics, parathormone, calcium, phosphorus, albumin, vitamin D levels, parathyroid scintigraphy results, neck US results and PTH washout results were recorded. Complications, recurrence, and pathology results were evaluated. Whether the developments of localization techniques have an effect on surgical techniques was examined.

**Results:** 107 cases were performed due to primary hyperparathyroidism. The female/male ratio was 86/21. The mean age of the patients was  $57.2 \pm 11.5$  years. Persistence was detected in 9.3% (n=10) of the cases. Twenty-four cases were performed focused surgery, 55 cases were performed unilateral exploration, 1 case was applied bilateral exploration, and 37 cases were performed parathyroidectomy plus thyroidectomy. While imaging methods were consistent in 86 cases, they were inconsistent in 21 cases. Terminal pathology results were reported as normal parathyroid tissue in 6 cases, no parathyroid tissue in 4 cases, hyperplasia in 2 cases, and adenoma in 95 cases.

**Conclusion:** In the recent years, the surgical success has increased in parallel with the success rates of the imaging techniques and more limited surgical techniques have been applied.

**Keywords** Primary hyperparathyroidism, parathyroid adenoma, parathyroidectomy

## PP-0240 [Endocrine Surgery]

# Minimally Invasive Parathyroidectomy with the ROLL (Radioguided Occult Lesion Localization) Technique

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**Objective:** The most common cause of primary hyperparathyroidism (pHPT) is solitary parathyroid adenoma. Minimally invasive parathyroidectomy (MIP) is a preferred surgical method for solitary parathyroid adenomas. The success of MIP depends on the correct indication of the lesion site. In this study, it was aimed to determine the efficacy and safety of the ROLL (Radioguided Occult Lesion Localization) technique in MIP in cases of pHPT with solitary parathyroid adenoma.

**Material and Methods:** Sixty-five pHPT patients with solitary parathyroid adenoma (52 F, 13 M, the mean age  $53,75 \pm 12,59$  years) were included in the study. Neck USG and dual-phase Tc-99m MIBI SPECT Scintigraphy were performed on all patients who were biochemically diagnosed with hyperparathyroidism. In the cases with suspicious or inconsistent results

in localization studies, PTH measurements in the wash-out fluid and aspiration biopsies were performed. All of the patients underwent MIP with the ROLL technique. On the day of operation, under the guidance of the USG, 0.10-0.15 mCi Tc-99m MAA (macroaggregated albumin) at 0.10 ml was directly injected into the lesion. The time of operation (time between skin incision and removal of the adenoma) was recorded. Blood was drawn for measuring serum PTH level at the 0th minute after anesthesia and at the 10th min after the removal of the lesion. In the cases with negative or inconsistent results of USG and MIBI scintigraphy, the samples were sent for the frozen section analysis. Post-operative serum Ca and PTH levels were followed.

**Results:** All marked lesions were detected under the guidance of the gamma probe and excised. Parathyroid adenoma was histopathologically confirmed in all cases. In all patients, 10 minutes after the removal of adenomas, there was a decrease of more than 50% in the PTH level compared to the value at the 0th min. The mean duration of operation was 23,13±5,23 min (min 12-max 35 min) and the mean hospital stay was 1.1 days (min 1-max 3 days). None of the patients developed surgical complications such as postoperative bleeding, permanent hypocalcemia, infection, or laryngeal nerve damage. Persistent or recurrent hyperparathyroidism (HPT) was not detected during the mean follow-up period of 6 months (min 3-max 30 months). In 4 cases with low vitamin D levels, normocalcemic PTH elevation was observed.

**Conclusion:** In the group of pHPT patients with solitary parathyroid adenoma, parathyroid adenomas were removed in all cases undergoing MIP with the ROLL technique, no major surgical complication was observed, and no persistent or recurrent HPT was detected during their follow-ups. The ROLL technique is an effective and reliable method in minimally invasive parathyroid surgery.

**Keywords:** Hyperparathyroidism, parathyroid adenoma, minimally invasive parathyroidectomy, ROLL (Radioguided Occult Lesion Localization), radioguided surgery

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## PP-0241 [Endocrine Surgery]

# Relationship between Thyroid Function Tests and Malignancy in Geriatric Patients

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**Objective:** Thyroid disease is an endocrine disease which is frequently treated surgically by the department of general surgery. In this study, we aimed to investigate the possible differences in the thyroid function test (TFT) values for malignancy between geriatric and non-geriatric patients, who were performed thyroid surgery.

**Material and Methods:** The files of patients undergoing thyroidectomy due to the diagnosis of nodular goiter in the general surgery clinics of our hospitals between January 2013 and September 2017 were retrospectively evaluated in accordance with the Helsinki Declaration criteria. Patients' ages, genders, preoperative TSH, T3 and T4 levels at admission, and postoperative histopathology reports were recorded from the file records. The patients were divided into two groups as Group 1 including the geriatric patient population and Group 2 including the non-geriatric patient population. The differences in thyroid function tests for malignancy between the groups were investigated. Statistical analysis was performed with SPSS (IBM, SPSS Corp.; Armonk, NY, USA) version 22 software.

**Results:** For the 250 patients included in the study, the median age was 48 (20-85) years and the female/male ratio was 4.95. In the postoperative histopathological evaluation, 58 (23.2%) patients had malignancy. Of these 58 patients, 51 had papillary thyroid cancer, 6 had follicular thyroid cancer, and 1 had medullary thyroid cancer. Thirty-nine (15.6%) patients were in the geriatric patient population. The rate of malignancy in the geriatric patients was 38.5%, whereas this rate was 20.4% in non-geriatric patients. This showed that the likelihood of detecting malignancy was higher in the geriatric patient population with the value of  $p=0.014$ . It was observed that the gender distribution was homogeneous between malignant and non-malignant patient groups ( $p:0.366$ ). When the TFT values of patients with benign - malignant pathology were examined, T3 was lower and TSH was higher in the group with malignancy, but there was no difference between the T4 levels ( $p:0.014$ ,  $p:0.007$ , and  $p:0.977$ ). When the TFT levels between the groups were examined separately, T3, T4, and TSH values were observed to have no effect on malignancy in the non-geriatric patient group ( $p:0.082$ ,  $p:0.608$  and  $p:0.131$ ). In the geriatric patients with malignancy, no significant difference was detected in T3 and T4 values, but TSH value was higher ( $p:0.103$ ,  $p:0.501$  and  $p:0.002$ ).

**Conclusion:** Based on the results of our study, we suggest that the risk of malignancy development is higher in hypothyroid patients among the geriatric patient population according to the preoperative thyroid function tests.

**Keywords:** Geriatrics, thyroid malignancy, thyroid function tests

## PP-0244 [Endocrine Surgery]

## Postoperative Histopathological Correlation of the Nodule Cytopathologically Reported as Benign: Our Results in 2158 Cases

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**Objective:** Fine needle aspiration biopsy (FNAB) provides the most important data to support the radiological imaging in the differentiation of benign and malignant thyroid nodules. The FNAB has the greatest place in the preoperative evaluation and FNAB results differ among the centers and pathologists. Cytopathological examination results previously reported as benign may be detected as malignant postoperatively. With the advancing technology, high resolution ultrasound with increased sensitivity diagnoses more asymptomatic nodules and thus more FNABs are performed. Although FNAB and its interpretation are explained in the recent guidelines, false positive or false negative results are still matters to be considered.

**Material and Methods:** In this study, it was aimed to investigate the prevalence of thyroid cancer as a result of histopathological examination in patients whose preoperative cytopathology results were reported as benign and who were operated in our clinic between 2010 and 2017.

**Results:** In the study, 4606 patients undergoing total thyroidectomy were evaluated. Of the patients, 954 (20%) were male and 3652 (80%) were female. The mean age was 44 (+13) years. The results of FNAB were benign in 2158 (46%) patients. The histopathological results were evaluated as malignant in 27 (1.2%) patients. Eleven of the cases were papillary carcinoma and 16 were follicular carcinoma. The mean size of the tumors was 1.63 cm (range 0.8-2.4 cm). Specificity is the percentage of true negatives among cases reported as negative (benign). False positive cases reduce the specificity of FNAB. When statistical calculations include only FNABs with the diagnosis of malignancy, there is no false positive in our series and the specificity of FNAB is 100%. In literature, the specificity of FNAB varies from 47.4% to 100% and it is generally above 95%. Our series was consistent with the literature.

**Conclusion:** In our series, most of the negative FNAB results were due to the fact that the samples did not represent the lesion and some were due to the misinterpretation of the pathologist because of inadequate clinical information sharing.

**Keywords:** Benign, correlation, nodule, cytopathology, thyroid

## PP-0245 [Endocrine Surgery]

## Our Experience of 1525 Total Thyroidectomies Performed with Energy Based Devices but No Drains

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**Material and Methods:** This study included 1525 patients who were performed total thyroidectomy between January 2015 and December 2017 in our clinic. All cases were performed with the same surgical technique and neck circumference, BMI, and the weight of specimens were measured and recorded in all patients. Thyroidectomy was performed with energy-based devices without using ligation and drain was not inserted in all patients. The patients were followed up for the postoperative development of seroma and hematoma.

**Results:** In 1454 of 1525 patients, total thyroidectomy was performed without using ligation with Harmonic FOCUS®-71 with Ligasure™ LF1212. Seroma was seen in three patients (Ligasure n:3) and was drained. Hematoma was observed in five patients (Ligasure n:1, Harmonic n:4). One patient developing hematoma was performed exploration and bleeding control. Four patients were followed conservatively. The mean duration of the operation was 47.5 minutes with the Ligasure and 36,7 minutes with the Harmonic. The mean duration of hospitalization was below 23 hours. Mortality was not seen.

**Conclusion:** The use of drain after thyroidectomy performed by using energy-based devices has no additional value for the follow-up of complications such as seroma or hematoma.

**Keywords:** Without ligation, without drain, thyroid, total thyroidectomy

## PP-0246 [Endocrine Surgery]

# The Frequency of Early Discharge After Thyroid Surgery in Geriatric Patients

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**Objective:** The World Health Organization chronologically defines the age of 65 years and over as the elderly population. The purpose of this study is to examine the frequency of early discharge after surgery in the geriatric patients who underwent only total thyroidectomy between 2016 and 2017.

**Material and Methods:** This study is a descriptive cross-sectional study. The study included 62 patients over the age of 65 years, who were performed total thyroidectomy in our department of endocrine surgery. Descriptive statistics were presented with mean, standard deviation, median, and minimum-maximum values for continuous data and numbers and percentages for categorical data. The IBM SPSS 21.0 package program was used for statistical analysis.

**Results:** The number of patients over 65 years of age, who underwent total thyroidectomy during this period in our clinic, was 62. Of these patients, 22 (35.5%) were male and 40 (64.5%) were female. The mean age of the patients was 69.2 ( $\pm 3.6$ , min 65, max 82) years. The mean BMI value of the patients was 29.3 ( $\pm 4.8$ , min 19.8, max 45). Of the 62 patients, 53 (85.5%) were discharged in the first 24 hours after surgery, 5 (8.1%) on the second postoperative day, 2 (3.2%) on the third postoperative day, and 2 (3.2%) on the fourth postoperative day. The average postoperative hospital stay was 1.2 days ( $\pm 0.6$ , min 1, max 4 days). Three patients (4.8%) had no additional comorbidities. Three of them had only cardiac disease (4.8%), two had only diabetes (3.2%), 24 had only hypertension (38.7%), 9 had cardiac disease and diabetes together (14.5%), 9 had hypertension and diabetes together (14.5%), and 4 had hypertension, diabetes and cardiac disease (6.5%). The ASA value was 2 in 46 patients (74.2%) and 3 in 12 patients (19.4%). Four patients had no ASA values. All surgeries were performed with energy-based devices without ligation and 10 (16.1%) patients were placed drain. The mean duration of operation was 52.9 min ( $\pm 12.6$  min 30 min max 80 min). One patient who underwent sternotomy due to substernal goiter was discharged on the fourth day after being followed in the intensive care unit for one day due to cardiac disease. Transient recurrent nerve paralysis was observed in six (9.7%) patients after the operation and none of the patients had hypocalcemia.

**Conclusion:** In experienced centers, the geriatric patients and those with comorbidities can be safely discharged in 24 hours after thyroid surgery provided that their preoperative preparations are completed.

**Keywords:** Early discharged, geriatrics, thyroidectomy

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## PP-0247 [Endocrine Surgery]

# A Rare Variant of Papillary Thyroid Cancer; Warthin-Like Thyroid Cancer: Our Series with 21 Cases

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**Objective:** Papillary thyroid cancer is the most common primary malignant tumor of the thyroid gland. On the other hand, Warthin-like papillary thyroid cancer is a rare variant. Warthin-like papillary thyroid carcinoma was first defined in a series of 13 cases by Apel et al. from the University of Toronto in 1995. The most important histologic feature of this carcinoma is the papillary structures lined with oncocyctic neoplastic cells with clear nucleus including nuclear pseudo-inclusions and having apparent lymphocytic infiltrates in the central stromas. This disease is called with this name because this image is also similar to the Warthin's tumor of the salivary glands.

**Material and Methods:** In our study, the patients who were performed total thyroidectomy between the years of 2005 and 2017 and whose pathological results were reported to be Warthin-like papillary thyroid carcinoma were examined. Among the patients included in our study, 20 (95%) were female and 1 (5%) was male. The mean age of the patients was 51.4 (range: 23-72) years. None of our patients had a history of radiation applied on the neck region.

**Results:** Preoperative fine needle aspiration biopsy (FNAB) results were papillary thyroid carcinoma in seven patients, benign cytology in six patients, follicular lesion of undetermined significance (FLUS) in one patient, and Hashimoto thyroiditis in one patient. Six patients were operated with the pre-diagnosis of multinodular goiter. The mean tumor diameter was 2.4 cm (range ?????). The patients undergoing biopsy had a background of lymphocytic thyroiditis. None of the tumors displayed lymphovascular invasion. All of our patients were initiated radioactive iodine therapy within the first month after surgery in the Department of Nuclear Medicine in our hospital. No recurrence and/or distant metastasis was observed in the patients and their follow-ups are continuing.



**Conclusion:** Warthin-like thyroid cancer has cytoplasmic and nuclear properties and interferes with many other thyroid lesions. Although a definite diagnosis may be very difficult with aspiration biopsy, the lesions can be recognized as neoplastic and defined as probable or precise papillary thyroid cancer. Surgery and postoperative treatment are the same as in the classical differentiated thyroid cancer. Although there is limited information about its prognosis, it has similarity with the classical variant.

**Keywords:** Papillary, thyroidectomy, warthin tumor

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## PP-0248 [Endocrine Surgery]

# Is Primary Hyperparathyroidism Surgery without Intraoperative Parathormone Measurement an Incomplete Surgery?

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**Objective:** Primary hyperparathyroidism (PHPT) is a disease usually caused by a single adenoma and oversecretion of parathormone (PTH) by the abnormal parathyroid gland that can be previously localized by imaging techniques. Preoperative scintigraphy and USG are frequently used to determine the location of the parathyroid tumor. Intraoperative PTH test (quick PTH-IOPHT) is recommended for the determination of whether the parathyroid gland showing hyperfunction is removed during the operation. This study was planned with the aim of evaluating the results of parathyroidectomy surgeries performed without IOPHT measurement test in PHPT patients.

**Material and Methods:** In our retrospective study, 133 patients who underwent single gland parathyroidectomy due to primary hyperparathyroidism between March 2012 and September 2017 were selected. The sample group patients were performed a successful operation without developing complications. PTH and serum calcium levels were measured at the postoperative 2nd hour.

**Results:** The localization of the parathyroid adenoma was determined at the rate of 66,9% in USG examination performed in 118 patients and 80,9% in scintigraphy performed in 115 patients. This rate was 100% in patients undergoing both scintigraphy and USG. While the pathology was reported as parathyroid adenoma in all of 42 patients found to have parathyroid adenoma in USG and scintigraphy, the rate of parathyroid adenoma not detected in any or none of the USG or scintigraphy was 55.3% (Sensitivity: 0,48, specificity: 1,00). Neck CT was used in 8 patients. The location of parathyroid adenoma was reported in 4 of these 8 patients. Neck MR examination was performed in 29 patients (17.9%). Parathyroid adenoma was detected in 14 patients but not in 15 patients. Eight patients underwent frozen analysis and 8 cases were evaluated as parathyroid adenoma. A significant decrease in parathormone and serum calcium levels was observed at the postoperative 2nd hour ( $p < 0.001$ ). The rate of normocalcemic patients in the 6th month follow-up was detected as 90%. When the pathology reports of the patients were examined, parathyroid adenoma was excised in 121 patients (90.9%), parathyroid hyperplasia in 1 patient (0.7%), parathyroidal cyst in 1 patient (0.7%), suspected lesion with unclear differentiation of parathyroid adenoma-carcinoma in 1 patient (0,7%), non-parathyroidal tissue in 4 patients (3%), and normal parathyroid gland in 3 patients (2,2%). Although it was thought that a single gland excision was performed in 2 patients (1.5%), parathyroid adenoma and parathyroid hyperplasia were excised in one patient and normal parathyroid gland and a parathyroid adenoma were excised in the other patient.

**Conclusion:** The success rate after parathyroidectomy was 92.1% in patients who underwent preoperative MIBI scintigraphy, preoperative USG, and intraoperative frozen analysis. In addition to its being an auxiliary method for cases that cannot be localized with imaging techniques and in which preoperative parathyroid tumor cannot be differentiated, parathyroidectomy can safely be performed by an experienced surgeon with imaging techniques without IOPHT test measurement.

**Keywords:** Quick PTH, intraoperative parathyroid, parathyroidectomy

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## PP-0249 [Endocrine Surgery]

# Effect of Short-acting Anesthetic Agents on Optimal V1 Signal Targeted to be Obtained During Intraoperative Nerve Monitoring

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**Objective:** Neuromuscular agents used during general anesthesia prevent the optimal EMG waves to be taken during intraoperative nerve monitoring (IONM). Accelerometer (% twitch (TW)) is a method routinely used for the quantitative monitoring of the neuromuscular transmission of the thumb and it can also reflect the reaction of the vocal muscles. In this study, we aimed to reveal the relationship between the TW values and V1 amplitude values by recording the induction time (T1) and TW values at the time when V1 value, the first value before resection, was taken.

**Material and Methods:** Each patient undergoing IONM was applied neuromuscular blockade with only 0.3 mg/kg rocuronium. Demographic data, surgical indications, surgery types, pre-resection (V1) and post-resection (V2) vagus values of all patients were recorded. Simultaneously, Accelerometer was used to measure TW values from the thumb. The TW values were evaluated by dividing into 5 groups as (1) <10%, (2) 11-25%, (3) 26-50%, (4) 51-75%, and (5) >75%, and the presence of a statistical relationship was investigated among these groups.

**Results:** The study was performed on 61 patients, including 45 males (74%) and 16 females (24%). The mean age of our patients was 50.93 (21-74) years. Of these patients, 37% were operated due to recurrent multinodular goiter and 29% due to thyroid cancer. The mostly performed surgeries were total thyroidectomy (32 cases, 52.5%) and completion thyroidectomy (19 cases, 31%). The mean T1 value of the patients was 39.7±13.66 (6-82) minutes and the mean V1 amplitude value was 521±243 µV (70µV-1390µV). The average V1 values for the groups were 552 µV, 463 µV, 543 µV, 513 µV, and 551 µV, respectively. In terms of the V1 values among the groups, there was no statistical difference.

**Conclusion:** It is possible to obtain V1 values while the effect of neuromuscular blockers on the peripheral muscles continues. This result suggests that the accelerometer, which is routinely used in the quantitative monitoring of the neuromuscular conduction of the thumb, may not reflect the responses of the vocal muscles.

**Keywords:** Thyroidectomy, intraoperative neuromonitorization, IONM, accelerometer, rocuronium, twitch

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## PP-0250 [Endocrine Surgery]

# 5-Year Experience in Total Thyroidectomy in Başkent University İstanbul Hospital

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**Objective:** Thyroidectomy is among the most commonly performed operation in general surgery and endocrine surgery clinics in our country, as in the whole world. In this study, it was aimed to evaluate the experience in thyroidectomy in Başkent University İstanbul Hospital.

**Material and Methods:** A total of 280 patients, who were diagnosed with surgical indication with the pre-diagnosis of nodular goiter in Başkent University İstanbul Hospital between January 2013 and January 2018, were evaluated retrospectively. The patients were examined in terms of their ages, genders, surgical techniques, complications, and pathology results.

**Results:** Of the patients, 210 (70%) were female and 70 (30%) were male and the female/male ratio was 6.3/1. Of 280 patients, 20 were performed unilateral total thyroidectomy+near-total thyroidectomy, and 260 (96.8%) were performed bilateral total thyroidectomy. The complications included bleeding in 1 (0.3%) patient, wound site infection in 1 (0.8%) patient, seroma in 2 (1.8%) patients, transient hypocalcemia in 32 (0.4%) patients, permanent hypocalcemia in 1 (0,6%) patient, and transient recurrent nerve damage in 8 (1.3%) patients. No permanent recurrent nerve injury and mortality were observed.

**Conclusion:** We believe that total thyroidectomy can safely be performed with acceptable complication rates. In patients with nodular goiter, total thyroidectomy should be preferred because it reduces the risks of recurrence, complications associated with re-operation, and malignancy.

**Keywords:** Endemic goiter, thyroidectomy, postoperative complications

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## PP-0251 [Endocrine Surgery]

# Peroperative Fast Parathormone Measurement in Surgical Treatment of Primary Hyperparathyroidism

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The data of 70 patients (51 females, 19 males) who were operated for primary hyperparathyroidism between January 2013 and January 2018 were prospectively recorded. The duration of follow-up varied from 4 to 75 months. Localization study was

performed with the neck USG and parathyroid scintigraphy before the operation. In the localization, neck USG with superficial probe and Tc-99m sestamibi scintigraphy were used. If discordant and/or insufficient/suspicious data were obtained in the localization study, these patients were excluded from the study. Calcium levels were measured at the morning of the operation. With peroperative incision, hPTH was evaluated from the peripheral venous blood. At the 20th minute after the adenoma excision, hPTH was measured. Bilateral neck exploration was not performed and focus surgery was performed. Each time, 8 ml blood was sent to the laboratory in ice and in a time less than 5 minutes. Analyses were performed with ECLIA (electrochemiluminescence immunoassay method) using Cobas e 411®, Roche-Hitachi device, and intact parathormone was measured. If the decrease in hPTH was over 50%, the operation was considered as successful and terminated. The levels of calcium were measured on the postoperative 2nd day. The patients who were discharged were followed up with the endocrinology department.

Intraoperative hPTH (IOhPTH) measurement allowed us to catch an undetermined double adenoma case in our study. Minimally invasive methods, focus surgery and unilateral exploration can be routinely performed as an alternative to bilateral neck exploration in the surgical treatment of primary hyperparathyroidism. With these methods, the complication rate will decrease but the presence of a possible double adenoma may pose a problem for the surgeon as a recurrent disease. In addition to good preoperative localization, the determination of IOhPTH may reduce the risk of recurrent disease.

**Keywords:** Fast parathormone measurement (hPTH), minimal invasive technique

## PP-0252 [Endocrine Surgery]

# Adrenal Neuroblastoma in an Adult Patient

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**Introduction:** Adrenal neuroblastoma is a malignancy that involves the peripheral sympathetic nervous system. It is most common in infants. It is rarely seen in the adult age group. It is a member of small round-cell tumors.

**Case:** A 29-year-old male patient consulted to an external center with the complaints of chest tightness and abdominal pain. Abdominal computed tomography (CT) and magnetic resonance imaging (MRI) were performed on the patient and a 6x4 cm adenoma was reported in the left surrenal gland. In the patient who was examined for the functionality of the adrenal adenoma, no abnormal value was found. Positron emission tomography (PET) was applied to the patient for malignancy and the result was reported to be an approximately 55x44 mm mass lesion with an SUV-max of 6 in the left surrenal gland, which was accompanied by calcification in the peripheral region, had central area that was ametabolic secondary to the possible degeneration, and had increased peripheral FDG uptake becoming more apparent in late images. Based on the present findings, surgery was recommended to the patient. The operation was laparoscopically started in the right lateral decubitus position with two 10 and one 5 trocars, but it was switched to open surgery with left subcostal incision because intraoperative arterial bleeding developed in the left surrenal gland. After the bleeding was controlled, the left surrenal gland and adenoma were excised without leaving residual tissue. The patient, who had no postoperative problems, was discharged on the 5th day. The result of pathological evaluation on a 7x5,5x4,5 cm excisional material was reported as a 5,5x5x5 cm encapsulated undifferentiated neuroblastoma from the poor histopathological group, displaying multinodularity in itself and having necrosis and hemorrhagic areas. In his follow-ups, metastasis in the 11th thoracal vertebra and local recurrence were detected in the postoperative 5th month. The patient continues to receive cisplatin and etoposide chemotherapy treatment under the supervision of the medical oncology department.

**Conclusion:** Adrenal neuroblastoma is a tumor of the peripheral sympathetic nervous system. It is rarely seen in the adult age group. It is generally found as a palpable mass in children. Specific symptoms may not be present, such as in the presented patient in the adult age group. With imaging methods such as CT and MRI, calcification and bleeding can be viewed and these findings may help to approach the diagnosis. In childhood age group, the number of cases diagnosed through the imaging methods is higher. The final diagnosis is established by pathological examination. In general, it is a malignancy with poor prognosis and it can metastasize to the bone, bone marrow, liver and lymph glands. It should not be forgotten that patients with metastasis findings may also be encountered. In the early stage, the primary treatment is surgery and it can be combined with other therapies according to the patient's stage. Chemotherapy, radiotherapy, and bone marrow transplantation are other treatment options for the advanced stage disease.

**Keywords:** Adrenal, mass, neuroblastoma

## PP-0253 [Endocrine Surgery]

# A case of Thyroid Follicular Carcinoma Occurring with Pelvis Metastasis 32 Years After Thyroidectomy

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**Introduction:** In patients with follicular thyroid carcinoma (FTC), 25% had extra thyroidal invasion, 5-10% had metastasis to the local lymph nodes, and 10-20% had distant metastasis. While the 10-year survival rate is 80-95% for patients with differentiated thyroid carcinoma, it decreases to 40% in patients with distant metastasis. Distant metastasis is seen in 25% of patients older than 40 years with follicular thyroid carcinoma. In this study, it was aimed to present the clinical and surgical findings of a patient, who had been performed total thyroidectomy 32 years ago and who consulted with pelvic mass and pain and was evaluated to have thyroid follicular carcinoma metastasis.

**Case:** A 72-year-old female patient was admitted to the Orthopedics Department of an external center with a complaint of hip pain. In the pelvic MR of the patient, a 14x11x12 cm mass lesion having irregular margin and displaying contrast enhancement and invasion to the surrounding tissue was observed in the left iliac wing. In PET/CT with 18F-FDG, a 13x11 cm mass lesion causing destruction in the bone and showing increased FDG uptake was found in the left iliac bone. No additional involvement other than mass was detected. Left iliac wing biopsy results obtained in two different centers were reported as carcinoma metastasis consistent with positive thyroglobulin thyroid carcinoma metastasis and TTF1. The pathological result of the core biopsy of the bone left iliac wing, which was performed in our center, was reported as thyroid dedifferentiated follicular carcinoma metastasis. The patient had a history of total thyroidectomy performed due to the diagnosis of multinodular goiter 32 years ago. However, histopathological report could not be achieved. The thyroid USG was consistent with multinodular goiter. The non-contrast-enhanced CT of the neck revealed nodular lesions involving calcification. Based on these findings, the patient was applied complementary thyroidectomy. In the histopathological examination, a suspicious follicular carcinoma area suggesting capsular infiltration in a 0.5 cm focus was detected. After completing the surgical treatment, radiotherapy was administered to the left iliac region by the Department of Radiation Oncology. Chemotherapy was not recommended by the Department of Medical Oncology because of the overall poor performance of the patient. Patient's follow-up is continuing with palliative pain treatment.

**Conclusion:** Distant metastasis rate in follicular thyroid carcinoma is 25%. It mostly metastasizes to the lung, bone, liver and brain hematogenously. Pathway is metastases. Bone metastasis rate has been reported as 7-28%. The whole body MR and PET-CT have a high diagnostic rate in the detection of bone metastasis in various tumors. In FTC, the primary treatment is surgery, but the role of post-operative medical treatment is also great. Medical treatment options include I-131 therapy, radiotherapy, and chemotherapy.

**Keywords:** Follicular carcinoma, bone, metastasis, pelvis, thyroid carcinoma

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## PP-0254 [Endocrine Surgery]

# Can Hematological Parameters be Used in the Differential Diagnosis of Thyroid Diseases?

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**Objective:** Neutrophil/leukocyte ratio (NLR) and platelet/leukocyte ratio (PLR) can be used as prognostic markers in thyroid cancer. The aim of this study is to investigate the efficacy of hematologic parameters in distinguishing malignant and benign thyroid diseases.

**Material and Methods:** The files of 604 patients undergoing thyroidectomies performed between 2010 and 2017 were scanned retrospectively and the patients were divided into three groups according to pathology results as group 1 (n=414) including benign thyroid diseases (BTD), group 2 (n=64) including thyroiditis (Tid), and group 3 (n=126) including malignant thyroid diseases (MTD). The leukocyte, neutrophil, lymphocyte, platelet, red cell distribution width (RDW), procalcitonin (PCT), free T4, TSH, ALT, AST parameters were examined in the laboratory analyses of the patients. The neutrophil/leukocyte ratio (NLR) and platelet/leukocyte (PLR) rates were calculated. The groups were compared statistically.

**Results:** When the groups were compared, the mean age was found 52.16±13.83, 50.08±12.61, and 52.37±15.19, respectively. In the comparison of the laboratory parameters, the number of leukocytes [(8.07±2.48) (p<0,05)], the number of platelets [(295.35±78.00) (p<0,05)], PCT value [(295,35±78,00) (p<0,05)], and free T4 value [(2,32±1,02) (p<0,05)] were higher in the group with malignant disease than in other two groups and the other values were statistically insignificant. When the values of benign thyroid patients were compare with those of the malignant patients, the number of neutrophils [(5,00±2,34) (p<0,05)], the number of lymphocytes [(2,33±0,71) (p<0,05)], RDW value [(14,05±1,51) (p<0,05)], neutrophil/leukocyte ratio [(2,45±2,19) (p<0,05)], and thrombocyte/leukocyte ratio [(136,93±53,06) (p<0,05)] were found to be high.

**Conclusion:** In this study, the platelet count, RDW, NLR, PLR, free T4, and PCT values were found to be high in patients with thyroid malignancy. In thyroid nodules, we think that these parameters may be significant in terms of malignancy potential of the nodule.

**Keywords:** Benign thyroid diseases, malignant thyroid diseases, neutrophil/leukocyte ratio, platelet/leukocyte ratio

## PP-0255 [Endocrine Surgery]

## Surgical Treatment of Medullary Thyroid Cancer and Our Clinical Experience

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**Objective:** Medullary thyroid cancer (MTC) is a very aggressive disease that causes serious morbidity and mortality although it is rarely seen in all thyroid cancers. Although it usually occurs as sporadic, familial transition can also be seen. In our study, it was aimed to present the treatment outcomes of MTC with poor prognosis and difficult management of treatment.

**Material and Methods:** The files of 1287 patients who underwent surgery for thyroid carcinoma between 2009 and 2018 were retrospectively evaluated. Twenty-one (1.6%) patients were diagnosed with MTC. The demographic and clinical characteristics of the patients were examined.

**Results:** Eleven (52.4%) of the patients were female, 10 (47.6%) were male, and their mean age was 54 (14-85) years. Sixteen (76.2%) patients were sporadic and 5 (23.8%) patients had familial transition. Before the operation, all patients were performed neck ultrasonography and they all had nodule in the thyroid gland. Eleven patients were performed the whole neck MR. The preoperative mean calcitonin was 881 (0-8200), calcium 8.9 (8.2-10.4), and CEA 16 (0-74). Fine needle aspiration biopsy was performed in all patients. Of the patients, 13 (51.9%) were diagnosed with the suspect of malignancy, 4 (19%) with MTC, 3 (14.3%) with follicular neoplasia, and 1 (4.8%) with papillary thyroid cancer. Bilateral total thyroidectomy + central and unilateral neck dissection was performed in 12 patients (57.1%), bilateral total thyroidectomy + central and bilateral neck dissection in 5 patients (23.8%), and bilateral total thyroidectomy in 4 patients (19%). In the pathology, lymph node metastasis was found in 13 patients (61.9%) and the mean number of lymph nodes was 12 (4-39). Three patients (14%) had concomitant papillary thyroid cancer. Four (19%) patients developed complications (permanent hoarseness, hypocalcemia, hemorrhage, pulmonary embolism). The mean hospital stay was 3 (1-12) days. The mean follow-up period was 52 (3-96) months. Five patients (23.8%) had recurrence in the cervical lymph nodes (6 months later), lung and bone metastases (12th and 18th months), lung metastasis (12th month), metastasis in the mediastinal lymph nodes (15th month), liver metastasis (6th month). Seven (33%) patients underwent chemoradiotherapy. No mortality occurred.

**Conclusion:** Surgery in MTC treatment is the gold standard for the control of loco-regional disease and it is the only curative method among the available treatment options. Although MTC has a relatively low incidence, it can lead to serious morbidity and mortality in patients in whom delayed and/or loco-regional control cannot be achieved.

**Keywords:** Medullary thyroid cancer, surgery, recurrence

## PP-0256 [Endocrine Surgery]

## Surgical Approach in Adrenal Masses: 3-Year Single Center Experience

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**Objective:** Today, various surgical techniques are used in the surgical treatment of adrenal masses according to the diameter of tumor, the diameter of adrenal mass, malignancy, patient's condition, and surgical experience. In this study, it was aimed to evaluate the experience of a single surgical clinic.

**Material and Methods:** Preoperative, intraoperative and postoperative data of adrenalectomy cases performed in our clinic between 2014-2017 were analyzed and preoperative diagnoses of the patients, type of the surgery, complication rates and length of hospitalization were evaluated retrospectively. From hormonally active masses, preoperative and postoperative steroid support was given in clinical and subclinical Cushing's syndrome. In Conn syndrome, preoperative potassium supplementation was administered and hypertension was treated. Pheochromocytomas were also treated with preoperative alpha blocker and beta

blocker and provided with liquid support. Transperitoneal laparoscopic adrenalectomy was performed in the small and medium sized masses thought to be benign in the position of primary lateral decubitus and transperitoneal open surgical intervention was performed in the case of cancer suspicion or in large masses.

**Results:** During this period, 70 patients (43F, 27M) with the mean age of 48.4±12.2 (22-71) years were operated. The preoperative diagnosis was pheochromocytoma in 26 patients (37%), paraganglioma in 1 (1.3%) patient, Cushing's syndrome in 19 patients (27%), and hyperaldosteronism in 9 (13%) patients. Other 15 patients were operated due to non-functional, metastatic lesion or adrenocortical cancer suspicion. The mean preoperative mass diameter was 4.3±2 cm (1-10). Resection was performed due to right adrenalectomy in 34 patients, left adrenalectomy in 33 patients, bilateral adrenalectomy in 2 patients, and preaortic paraganglioma in 1 patient. Laparoscopic surgery was started in 65 patients. In 60 patients, surgery was completed laparoscopically but in 5 (7.7%) patients, it was switched to open surgery. The reason for conversion to open surgery was arterial hemorrhage from the left kidney upper pole in 1 patient, bleeding from the spleen in 1 patient, suspected pancreatic and splenic ischemia in 1 patient, hemorrhage associated with renal artery opening due to the adhesion of malignant pheochromocytoma to renal artery in 1 patient, hemorrhage associated with the insertion of port into the liver enlarging due to pituitary Cushing's disease in 1 patient, and insufficient working space resulted from inadequate insufflation of the abdomen due to morbid obesity. The open surgical procedure was performed due to the suspicion of malignancy in 4 patients and large mass in 1 patient. None of the patients required blood transfusions perioperatively. The mean duration of hospitalization was 8.2±9.7 (2-60) days. In one patient with preoperative diagnosis of COPD (1.3%), postoperative mortality due to ARDS developed. One patient developed a pancreas fistula, which was closed with conservative treatment in 60 days. In one patient who was operated with open technique, an incisional hernia developed.

**Conclusion:** Laparoscopic adrenalectomy is the first and reliable choice for small and medium-sized adrenal lesions. The reason for conversion to the open surgery is usually bleeding, and the rate of conversion to the open surgery is similar to the current literature.

**Keywords:** Adrenalectomy, cushing, conn, pheochromocytoma, laparoscopic adrenalectomy

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## PP-0257 [Endocrine Surgery]

# The Effects of Intraoperative Parathormone Measurement in Primary Hyperparathyroidism

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**Objective:** The only treatment option for primary hyperparathyroidism (PHPT) is surgery. In general, intraoperative parathormone (IOPTH) measurement is recommended to confirm the removal of the pathological gland. On the other hand, some studies have reported that high surgical success can be achieved without IOPTH measurement. In this study, it was aimed to reveal the clinicopathological features of patients undergoing IOPTH in PHPT and to compare the clinical, biochemical, radiological, and pathological results of patients with and without IOPTH measurement.

**Material and Methods:** The clinical, biochemical, radiological and pathological results of 185 patients who were operated for PHPT between January 2014 and December 2016 were retrospectively analyzed. In statistical analysis, the Chi-square analysis was used for qualitative data and the independent sample t-test was used for quantitative data.

**Results:** A total of 92 patients (49.7%) underwent IOPTH measurements. While the IOPTH measurement showed clinically correct result in 82 patients (89.2%), false negative rate was 10.2% and false positive rate was 25%. The sensitivity and specificity of IOPTH measurement were 89.8% and 75%, respectively. The rate of decrease in IOPTH level was lower in cases with multiple pathologic glands due to hyperplasia (66.6%), it was higher in the presence of a single adenoma (89.7%) ( $p=0.08$ ). Surgical success rate of IOPTH group was 95.7%, whereas it was 90.3% ( $p=0.25$ ) in non-IOPTH group. No significant difference was detected between the groups in terms of preoperative calcium, parathormone, phosphorus, Vitamin D, ALP levels, the presence of urinary stone, the presence of osteoporosis, type of operation, the application of frozen section analysis, duration of hospitalization, pathological gland location, and pathological gland diameter.

**Conclusion:** The IOPTH measurement is a reliable test with high accuracy. Non-application of IOPTH measurement may cause to have less than acceptable surgical success rate. Although preoperative localization studies are consistent with surgical findings, we recommend IOPTH measurement especially in patients that will undergo minimally invasive parathyroidectomy due to PHPT.

**Keywords:** Primary hyperparathyroidism, parathyroidectomy, intraoperative parathormone

## PP-0258 [Endocrine Surgery]

## The Frequency of Developmental Thyroid Anomalies Affecting the Completeness of Total Thyroidectomy

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**Objective:** Developmental thyroid anomalies frequently occur during the embryological development and the most commonly known ones include pyramidal lobe (PL) and thyrothymic ligament thyroid remnants (TTR). The Zuckerkandl tubercle (ZT) is considered to be the fusion point of the ultimabranial body and the median thyroid, and it may become prominent by growing. In this study, we aimed to evaluate the frequency of PL, TTR, and enlarged ZT.

**Material and Methods:** In the thyroid operations performed consecutively in our clinic, these anatomic structures were evaluated prospectively. The existence and location of pyramidal lobe, the presence and grade of TTR, and ZT were assessed. TTRs were classified in 4 grades: Grade 1; in the form of thyroid tissue pedicle that can be clearly distinguished from the lower pole of the thyroid lobe, Grade 2; a nodular structure that is attached to the thyroid with a narrow thyroid tissue pedicle, Grade 3; structure attached to the thyroid with fibrovascular stem, and Grade 4; thyroid tissue unrelated with the thyroid. The Zuckerkandl tubule was classified as 4 degrees: Grade 0; not visible, Grade 1; thickening only at the lateral edge of the thyroid lobe, Grade 3; Less than 1 cm, and Grade 4; Larger than 1 cm. Apaprent 2nd and 3rd degree ZT, which were likely to be left in the study, were assessed.

**Results:** In the study, 275 neck sides (right: 138-52.2%, left: 137-49.8%) were evaluated in 169 (131F, 38M) patients with the mean age of 42.29+14.07 (17-89) years. PL was detected in 60 of 169 patients (35.5%), including two pyramidal lobes in two patients. Of these, 26 were on the right, 33 on the left, and 3 on the middle location. PL size was 2.46+1.07 cm and volume was 0.46+0.63 cm<sup>3</sup>. TTR was detected in totally 30 neck (10.9%) sides and of them, 18 (13.04%) were on the left and 12 (8.76%) were on the right. Twenty-five of them (83.3%) were 1st degree (16 right side, 9 left side), 1 (3.3%) (right side) was 2nd degree, and 4 (13.4%) (1 right and 3 left) were 3<sup>rd</sup> degree. The mean TTR diameter was 2.29+1.56 (0.5-5.5) cm, the mean volume was 7.38 + 11.2 cm<sup>3</sup>, and there was no significant difference between the right and left sides. A total of 138 thyroid lobes (50.2%) (40% on the right and 26% on the left) were diagnosed with 2nd and 3rd degree ZT. The rate of ZTs was 60.1% on the right side (21% 2nd degree, 39.1% 3rd degree) and 40.1% on left side (14.6% 2nd degree and 25.5% third degree), and it was found that it was significantly higher on the right side (p=0.001). The ZT size was 1.71+1.1 cm (0.30-7), volume was 2.87+11.67 cm<sup>3</sup> (0-125).

**Conclusion:** While pyramidal lobe and enlarged ZT are the commonly encountered anatomical structures, TTR is less frequent. To overlook these structures is the main factor that prevents to perform total thyroidectomy completely in cases in which total thyroidectomy is considered to be performed and leads to the occurrence of recurrence. For this reason, the existence of these structures should be considered in every operation during thyroidectomy in order to perform total thyroidectomy completely, the thyroid and lodge should be carefully evaluated anatomically during operation, and attention should be paid for not overlooking these structures.

**Keywords:** Pyramidal lobe, Zuckerkandl tubercle, thyrothymic ligament thyroid remnants

## PP-0260 [Endocrine Surgery]

## Our Experience in Retrosternal Thyroid and Parathyroid Pathologies

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**Objective:** Retrosternal thyroid pathologies are common and they have been reported in 1-20% of all patients undergoing thyroidectomy. Retrosternal parathyroid tissue is usually detected in the interventions performed for ectopic adenoma. While cervical incision is adequate for most of the patients, sternotomy may be required in some cases. In this article, we aimed to present our experience of split sternotomy performed due to retrosternal thyroid and parathyroid pathology in our clinic.

**Material and Methods:** The files of 10 patients undergoing sternotomy for retrosternal goiter/thyroid carcinoma/parathyroid adenoma at the Department of General Surgery in İzmir Katip Çelebi University Atatürk Training and Research Hospital between January 2010 and September 2017 were retrospectively evaluated. Patients' demographic features, surgical and pathologic data, and surgical complications were recorded based on information in the patient files and database. All cases with goiter/thyroid

cancer and ectopic mediastinal parathyroid adenoma extending to the 10 cm inferior area of the jugular notch in ultrasonography and/or tomography were consulted with the department of cardiovascular surgery for evaluating in term of sternotomy and written approval was received. As a standard approach, cervical incision was made primarily. In the patients in whom the mediastinal thyroid tissue could not be reached with the cervical approach, a split sternotomy was performed with the cardiovascular surgery team at the superior border of the cervical incision and the pathological thyroid tissue was reached in all patients with the final "T" incision.

**Results:** The mean age was calculated as  $57.3 \pm 12.5$  (45-83) years. Eight of the patients (80%) were female and 2 (20%) were male. The mean duration of surgery was  $233.9 \pm 33.1$  minutes (185-285). Six of the patients (60%) had compression findings causing dyspnea. The surgical indication was multinodular goitre (MNG) in 3 patients (30%), recurrent MNG in 3 patients (30%), primary hyperparathyroidism in 2 patients (20%), and thyroid cancer in 2 patients (20%). While the procedure was the first intervention in 5 patients (50%), 5 (50%) patients had a history of previous cervical intervention. The mean duration of hospital stay was calculated as  $5.1 \pm 3.4$  days (2-14). Postoperative hypocalcemia developed in 6 patients (60%) and unilateral vocal cord paralysis in 1 patient (10%), and all complications spontaneously healed in a mean duration of 3 weeks. None of the patients had perioperative mortality or respiratory problems associated with sternotomy. Again, no median sternotomy was required in any patient.

**Conclusion:** Substernal goiters can cause dyspnea, dysphagia, vascular compression, and even death. In patients for whom cervical incision is insufficient, split sternotomy is an adequate and applicable method for the success of the operation.

**Keywords:** Ectopic parathyroid, retrosternal goiter, cervical approach, split sternotomy, thyroidectomy

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## PP-0261 [Endocrine Surgery]

# Primary Thyroid Lymphoma Causing Chylothorax

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**Introduction:** Primary thyroid lymphoma constitutes 1-2% of all thyroid cancers and 2% of all lymphomas. It is more frequent in females and in the age range of 65-75 years. Hashimoto's thyroiditis is the most important risk factor. Clinical findings of lymphoma are rarely seen. Patients are suddenly admitted with a gradually increasing mass on the neck and its compression effects. Chylothorax is the leakage of lymphatic fluid into the thorax. It occurs with traumatic and non-traumatic effects. The compression effect is the most common non-traumatic cause. Mortality may occur if early diagnosis is not possible. In this case, a patient having a rapidly growing undiagnosed mass on the neck and chylothorax will be presented.

**Case:** In a 50-year-old male patient without a known comorbid disease, the result of biopsy, which was taken due to the complaint of a mass gradually growing on the neck for 6 months, was reported to be consistent with severe lymphocytic thyroiditis. He was referred to our department because he had 600 cc chylous fluid per day in the thoracic tube inserted due to the presence of pleural effusion by an external center where he had consulted for shortness of breath. At the first examination, a hard mass covering the entire neck of the patient and preventing neck movements was palpated. No signs of respiratory distress or infection were observed. In the biochemistry results, the proinflammatory parameters and thyroid function tests were normal. In the MR, a 12x14 cm mass pushing the surrounding tissues was seen in the left thyroid lobe. Intensive FDG uptake was seen in PET. Moreover, an additional 5 cm lesion with high FDG uptake was seen in the bronchial bifurcation behind the esophagus. No leakage was detected in lymphangiographies performed consecutively. No result was obtained in the FNAB, which was taken from the thyroid and mediastinal mass with the guidance of endo USG. The result of the excisional biopsy from the conglomerate lymph node on the neck was reported as high-grade diffuse large B-cell lymphoma. The patient received parenteral nutrition without lipids during this period. It was observed that the mean daily drainage was 200cc. When oral feeding without lipids was started, it was observed that the drainage increased to be 600cc per day. An apparent shrinkage was seen in the mass after high-dose steroid treatment. Vincristine sulphate, rituximab, doxorubicin, cyclophosphamide and etoposide regimen was initiated by the department of hematology. Oral intake was started after therapy and thoracic tube was removed due to the absence of fluid in the thoracic drain. No complications were observed during the treatment period. After 4 cycles of CT, the neck examination returned to normal and complete response was seen on PET imaging.

**Conclusion:** Primary thyroid lymphomas are rarely seen malignancies. Although the clinical picture may seem very obvious, it can often be confused with non-differentiated thyroid cancers. Most of the time, FNAB is inadequate. For this reason, excisional biopsy in patients suspected to have lymphoma helps to avoid time loss and gives more accurate results. Primary thyroid lymphomas give a dramatical response to chemotherapy and steroid treatment. In the absence of a septic picture in complications such as chylothorax, surgical intervention should not be performed and response to the treatment should be waited.

**Keywords:** Primary thyroid lymphoma, chylothorax, thorax tube



## PP-0262 [Endocrine Surgery]

## Evaluation of the Results of Unintended During Thyroidectomy and Risk Factors

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**Objective:** Unintended parathyroidectomy during thyroid surgery is a common complication. Our aim in this presented study is to determine the incidence and risk factors of unintended parathyroidectomy during thyroidectomy.

**Material and Methods:** The data of 486 cases of thyroidectomy performed in our clinic between June 2015 and June 2017 were retrospectively evaluated. The study included 53 patients whose histopathological examination of the surgical specimen revealed parathyroid tissue. The patients were evaluated in terms of age, gender, type of surgery, histopathological diagnosis, whether or not lymph node dissection was performed, number of removed parathyroid tissues, and symptoms of hypoparathyroidism (permanent, prolonged and transient).

**Results:** Of the patients, 37 were female, 16 were male, and the median age was 51 (range: 18-82) years. The incidence of unintended parathyroidectomy was 10.5%. The number of excised parathyroid gland was 3 in 4 cases, 2 in 11 cases, and 1 in 38 cases. While the histopathological diagnosis was malignant in 32 patients, it was benign in 21 patients. Total thyroidectomy was performed in 42 patients, complementary thyroidectomy in 6 patients, and subtotal thyroidectomy in 5 patients. Central lymph node dissection was performed in 18.9% of the patients. The rates of the development of transient, prolonged and permanent hypoparathyroidism in postoperative follow-ups were 28.4%, 7.5% and 18.9%, respectively, and 24 (45.2%) patients were asymptomatic. The mean duration of the occurrence of the symptoms was 1.8 days. The symptoms of hypoparathyroidism were more frequent in patients undergoing central lymph node dissection ( $p=0.022$ ). There was a statistically significant difference in terms of the number of excised parathyroid tissues and the symptoms of postoperative hypoparathyroidism ( $p=0.035$ ). According to the results of univariate analysis, while central lymph node dissection ( $p=0.002$ ) and histopathological diagnosis ( $p=0.015$ ) were found to be associated with unintended parathyroidectomy, no relationship was found with age, gender and surgical type ( $p>0.05$ ). According to the results of multivariate analysis, central lymph node dissection was found to be an independent risk factor for unintended parathyroidectomy ( $p=0.001$ ).

**Conclusion:** The rate of unintended parathyroidectomy during thyroid surgery was 10.5%. The addition of central lymph node dissection to thyroid surgery and histopathological diagnosis are independent risk factors for unintended parathyroidectomy.

**Keywords:** Unintended parathyroidectomy, risk factors, incidence

## PP-0263 [Endocrine Surgery]

## New BRAF Mutation in Papillary Thyroid Carcinoma

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**Objective:** The BRAF mutation is seen in papillary thyroid carcinoma at the rate of 30-87% and it has been shown to be directly associated with clinical process, recurrence and inadequate treatment in many studies. The mutations contained in this gene are point gene mutation, small in-frame deletions or insertions, and new chromosomal sequences. Among these, V600E mutation is seen in 99% of BRAF mutations in thyroid cancer. Other BRAF mutations, which are seen more rarely, have also been defined. In this study, a new BRAF mutation was defined in a patient diagnosed with PTC Follicular variant.

**Material and Methods:** A 48-year-old male patient was performed thyroid resection with the pre-diagnosis of papillary carcinoma, and tumor samples in paraffin-embedded formalin were used for mutation analysis. The presence of mutation in the 15th exon of the BRAF gene was investigated by PCR-based direct sequencing.

**Results:** Sequence analysis revealed a 3-nucleotide CTA insertion mutation (c.1793\_1794insCTA) between the positions of 1793 and 1794. This mutation leads to tyrosine amino acid insertion between the codons of 598 and 599 (p.Ala598\_Thr599insTyr). This new mutation was confirmed by a second PCR reaction with a different primer set and re-genomic DNA isolation from a different tissue block.

**Conclusion:** We demonstrated an unspecified insertion mutation in the 15th exon of the BRAF gene in a patient with follicular variant papillary thyroid carcinoma. Further studies are needed to characterize the clinical significance of BRAF mutations rarely seen in thyroid cancers.

**Keywords:** Thyroid, carcinom, braf, new mutation

## PP-0264 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# How to Consider Rare Causes of Acute Abdomen in a Single Case

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**Introduction:** Of the patients admitted to the emergency unit due to abdominal pain, those diagnosed with organ perforation, bowel obstruction, and mesenteric vascular disease are usually performed surgical intervention. The good anamnesis and physical examination taken from these patients are essential for the establishment of diagnosis. In this case, we wanted to emphasize a rarely seen surgical reason in a patient consulting with the clinical picture of acute abdomen.

**Case:** A 50-year-old female patient underwent gastroscopy in our endoscopy unit and consulted to our emergency department with a complaint of abdominal pain that started suddenly in 2 hours after eating food after the procedure. In the examination, the patient was tachycardic and hypotensive. She had defense and rebound in the abdomen. Leukocyte was above 13,000/mm<sup>3</sup>. The presence of suspicious free air image under the right diaphragm in the chest X-ray suggested perforation. In the abdominal tomography, it was observed that the diaphragm on the right side was elevated upward and the small intestine loops were between the liver and diaphragm. The patient was diagnosed with Chilaiditi syndrome. However, due to the deterioration of the patient's clinical state, emergency surgery was performed. It was observed in the laparotomy that there was internal herniation in the small intestine at 80 cm from the treitz. In the proximal area, the intestinal loops were between the liver and the diaphragm and necrosis occurred on the approximately 10-cm intestinal loop in the herniation site.

**Conclusion:** The complication of upper GIS endoscopy is very rare. Perforation and bleeding may occur while removing a foreign body, performing polypectomy, or taking a deep biopsy. If there is a history of endoscopy in patients admitted to the emergency unit, iatrogenic complications should be kept in mind for pre-diagnosis. In patients with abdominal pain, anamnesis and physical examination are essential. In patients who are suspected to have perforation and pre-diagnosed with Chilaiditi syndrome, as in this case, intestinal obstruction may occur both at the level of the small intestine and at the level of the large intestine. In the treatment of Chilaiditi syndrome, fluid replacement and bowel decompression should be applied primarily. Surgery is performed in patients who do not respond to conservative treatment. In internal herniations, mortality due to intestinal ischemia increases up to 20%. Internal herniation is caused by congenital mesenteric defect in children and previous surgeries or blunt traumas in adulthood. We wanted to present and discuss a patient who was considered to have stomach perforation at the anamnesis, found to have Chilaiditi syndrome in the examinations, and operated due to the surgical abdomen picture and detected to have small bowel internal herniation.

**Keywords:** Acute abdomen, chilaiditi syndrome, internal herniation

## PP-0265 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Complications Encountered in our Endoscopy Unit and Our Treatment Methods

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**Objective:** Gastroscopy and colonoscopy are the most commonly used interventional procedures for diagnosis and treatment in the gastrointestinal system. During colonoscopy, rarely serious and frequently minor complications are encountered. Hemorrhage and perforation can be considered to be the most important complications in upper and lower gastrointestinal endoscopic procedures. In this study, we wanted to present the major complications and their treatments in our endoscopy unit in the last 5 years.

**Material and Methods:** A total of 16006 endoscopic procedures were performed in our endoscopy unit between the years of 2011 and 2016. Of them, upper endoscopy was performed in 11420 (71%) patients, total colonoscopy in 4316 (26%) patients, and percutaneous endoscopic gastrostomy in 270 (3%) patients. In 200 gastroscopic procedures and 725 colonoscopies, polypectomy was applied. Two patients had respiratory arrest. Diverticular perforation in the descending colon occurred in 2 patients and cecal tumor perforation in one patient. The most interesting was the development of transverse colon perforation and

pneumothorax in a patient who was not known to have morgagni hernia, which is a rare complication in literature. Because colon cleanse was complete, primary repair was applied on diverticular perforations. In the patient with cecum perforation, because the intraoperative view was also in favor of tumor, left hemicolectomy and approximately 10 cm small bowel segment were removed and anastomosis was performed. In another patient, who was later found to have a morgagni hernia, it was found that perforation and pneumothorax developed in the transverse colon. The perforated area was not suitable for primary repair, resection anastomosis was applied, hernia repair was performed, and the patient was followed and treated with a chest tube. Another rare complication was the presence of Chilaiditi syndrome, impaired blood supply of the 5-cm jejunum loop due to internal herniation in the small intestine and then the application of resection anastomosis in a patient admitted to the emergency unit with the picture acute abdomen after gastroscopy.

**Conclusion:** Perforations in endoscopic procedures are rarely encountered, but have high morbidity and mortality. In diagnostic colonoscopies, perforation is observed at a rate of 0,01-0,4%. Diverticular diseases, previous abdominal surgery, malignancy, advanced age, and inflammatory bowel diseases can be considered as risk factors in perforations. Complications rarely occur in experienced hands and early diagnosis and treatment are essential.

**Keywords:** Endoscopy, complication, management of complication

## PP-0266 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# An Unusual Complication During ERCP: Supracrural Stomach Perforation

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**Introduction:** Endoscopic retrograde cholangiopancreatography (ERCP) is widely used in the diagnosis and treatment of hepatobiliary and pancreatic diseases. However, there is a risk of complication associated with ERCP at the rate of approximately 5-10%. Pancreatitis, bleeding, cholangitis, perforation, pneumothorax, air embolism, spleen injury, and rarely basket impaction are some of the complications. However, the most frightening complication of ERCP is perforation because of its high mortality. The peripapillary area is the most common site of perforation after ERCP. Besides that, perforations can also be seen in different anatomical locations. In this study, we present a case of supracrural gastric perforation detected during ERCP.

**Case:** An 86-year-old female patient was referred to our clinic with the diagnosis of cholelithiasis and choledocholithiasis. Large type III hiatal hernia was detected during the ERCP procedure. Despite the absence of any difficulty during the application of duodenoscope along the esophageal and gastric lumen, the greater curvature of the stomach and omentum were viewed suddenly. The duodenoscope was retracted and the procedure was restarted. Perforation area was not observed, normal anatomical structures were passed, and ERCP procedure was completed. Gastroscopy was performed to rule out perforation. Gastroscopy revealed perforation of the stomach in the supracrural area and the patient was operated.

**Conclusion:** A detailed and well-documented anamnesis for the symptoms of hiatal hernia and reflux should be taken from the patients before the ERCP procedure. While advancing with duodenoscopy, the intraluminal structures should be seen clearly and the procedure should be continued. If there is any doubt about perforation, gastroscopic evaluation after ERCP should be performed to confirm the pathology. ERCP endoscopists should be aware of that perforation may occur not only in the juxtapapillary region but also in almost everywhere from the esophagus to the Trietz ligament.

**Keywords:** ERCP, perforation, gastroscopy, sliding hernia

## PP-0267 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Assessment of the Incidence of Helicobacter Pylori Colonization in Northeastern Anatolia Region

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**Objective:** The frequency of Helicobacter pylori (HP) colonization was investigated in patients who were admitted to our hospital and performed elective gastroscopy.

**Material and Methods:** We retrospectively reviewed 1,400 patients admitted to Sarıkamış State Hospital between the years of 2012 and 2016 and performed elective gastroscopy, whose files could be reached. The frequency of HP was investigated.

**Results:** HP positivity was detected in 994 (71%) of 1400 patients, 798 of whom were female (57.0%). The mean age was calculated as 36.9 (min 14, max 82) years. Gastroscoically, 607 patients had isolated antral gastritis (43,4%), 330 patients had erythematous pangastritis (23,6%), 359 patients had bulbitis accompanying stomach inflammation (25,7%) and 44 patients had other findings (inflammation in the extra-antrum areas, esophagitis, polypoid lesion) (3,2%). Endoscopic findings were reported as normal in 56 patients (4%). In addition, gastric ulcer (2.6%) was found in 36 patients, duodenal ulcer in 235 patients (17.8%), and Barrett metaplasia in 88 patients (6.3%).

**Conclusion:** The HP frequency in the Northeastern Anatolia Region was determined as 71.1%. There was a strong correlation between gastric ulcer and HP.

**Keywords:** Endoscopy, gastritis, helicobacter pylori

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## PP-0268 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Unusual Perforations in ERCP Procedure

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**Introduction:** Endoscopic retrograde cholangiopancreatography (ERCP) is an interventional method used in the diagnosis and treatment of benign or malignant hepatopancreaticobiliary diseases. The rate of complication risk is between 5% and 10% during ERCP procedure. The most frightening complication of ERCP is perforation because of the highest mortality rate. The most common location of perforation after ERCP is the peripapillary region. However, perforations can also be seen in unusual anatomical localizations. Clinical findings and diagnostic features of unusual perforations resemble peripapillary perforations, but their morbidity and mortality differ.

### Case:

**Case 1:** An 86-year-old female patient was referred by an external center with the diagnoses of cholelithiasis and choledocholithiasis. During ERCP, supracrural gastric perforation was detected in the large type III hiatal hernia. An emergency laparotomy was performed and she was discharged on the 7th postoperative day.

**Case 2:** A 53-year-old female patient, who was performed ERCP for choledocholithiasis and then inserted temporary stent after the procedure, was hospitalized for the removal of biliary stent. After the removal of the stent, laparotomy was performed to the patient who developed peritonitis and peroperative Trietz perforation was detected.

**Case 3:** A 66-year-old female patient was hospitalized with the diagnosis of choledocholithiasis. Sphincterotomy and stone extirpation were applied to the patient undergoing ERCP and a temporary stent was inserted to control the large stone and cholangitis. The patient was discharged. Despite the placement of the stent, the patient consulted to the emergency department because her cholangitis did not heal and she developed septic picture. Perforation was detected in the CT and emergency surgery was performed. Peroperative stent was observed to have undergone transduodenal migration and it was perforated into the retroperitoneum.

**Conclusion:** Perforation can be seen during any ERCP procedure. It should be kept in mind that perforations may also occur outside the peripapillary area. In unusual perforations, the treatment algorithm and mortality differ.

**Keywords:** Unusual, perforation, ERCP, complication, stent

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## PP-0269 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Our Experience of ERCP at a Secondary Care General Surgery Department

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**Objective:** ERCP is a specific procedure that provides both diagnostic and therapeutic possibilities, especially for the pathologies that can occur in the main bile duct, biliary tracts in the liver and pancreatic duct. Because the treatments of most diagnoses established with ERCP and ERCP complications are related to surgery and ERCP procedure after surgical interventions dissolve

the problem of additional surgery, we aimed to explain in this study that ERCP is a very important weapon and power for general surgeons.

**Material and Methods:** From March 15, 2017 to February 1, 2018, we performed ERCP on a total of 110 patients in our clinic. PENTAX duodenoscopy available in our clinic was used for all patients. Before the procedure, anesthesia consultation was absolutely done for each patient and dormicum was administered every patient by the department of anesthesia as premedication. The mean duration of the procedure was 23.9 (13-40) minutes. Sphincterotomy was performed in all patients whose papillary cannulations were provided and who were able to undergo cholangiography. In 16 patients, papillary cannulation could not be carried out and the procedure was re-tried for all of these patients after 2 days. Four were successful and 12 were referred to the upper center. Sphincterotomy with round tip, balloon, basket, biopsy forceps and 10f 90 mm stent were used.

**Results:** Papillary cannulation was successfully performed in 98 patients, 38 of them were placed stent. Of the patients placed stent, 13 were malignant. Seven patients were operated for biliary fistula developing after cholecystectomy and hydatid cyst operation and 18 patients were operated due to stone that could not be removed despite the use of basket and lithotripsy. Of 13 malignant patients, 6 had pancreas cancer, 3 had klatskin cancer, and 2 had cholangiocellular cancer. Two patients had papillary tumor. Twelve patients had oddi dysfunction and 10 patients had mirizzi syndrome. Stone and mud were removed in 38 patients. 14 of them were secondary gallstones, 5 of which required the use of basket. Basket impaction occurred in 2 of them. One of them was removed with lithotripsy and the other with surgical intervention. Retroperitoneal perforation occurred in 1 patient, followed by medical treatment, and regressed.

**Conclusion:** ERCP is a procedure that can be easily performed by general surgeons and can be performed with a less invasive procedure and short-term discharge by preventing the application of major surgical interventions in many patients in this respect. In terms of the management of post-op biliary fistulas, preparation of pre-op malignancy patients, and no need for open surgery in choledochal stones and hydatid cyst operations, it is favorable. It is an important facility for choledochal and pancreatic pathologies that cannot be diagnosed through MRCP. We suggest that it is a good weapon for all general surgeons, which should definitely be learned.

**Keywords:** ERCP, choledoch, sphincterotomy

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PP-0270 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

## Intraoperative Endoscopic Retrograde Cholangiopancreatography in Complex Benign Biliary Tract Pathologies: Case Series

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**Objective:** This study presents data on the performance of intraoperative Endoscopic Retrograde Cholangiopancreatography (ERCP) for different cases with acute and complex pathologies of the bile ducts.

**Material and Methods:** The patients undergoing intraoperative ERCP for different acute and complex bile duct pathologies (including injury and cystic duct leakage) were retrospectively evaluated. All patients were analyzed according to their demographic findings, etiologies, treatment, and results.

**Results:** Intraoperative ERCP was performed in 4 patients with different diagnosis, 2 of whom were (50%) female and 2 (50%) of whom were male. The mean age of the patients was 46.8 (range 28-75) years. Three patients had biliary tract injury and one had complicated hydatid cyst accompanied by jaundice (T bile: 18 mg dL-1). All the patients had septic picture. Patients were performed laparotomy and intraoperative ERCP was successfully carried out by using the Rendezvous technique. For the last patient, intraoperative ERCP was used for the diagnosis and treatment of biliary leakage.

**Conclusion:** Intraoperative ERCP is a safe and effective method for the treatment of acute and complex bile duct pathologies.

**Keywords:** Intraoperative ERCP, bile duct injury, rendezvous technique

## PP-0271 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Evaluation of Gastric Premalignant Lesions With I-scan Endoscopy

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**Objective:** Gastric cancer is one of the most common types of cancer in the world with geographical, ethnic and socioeconomic differences. It is the second most common cause of cancer-related mortality. Gastric cancers are often resistant to radiotherapy and chemotherapy, and surgical treatment is the only treatment with curative potential. With the detection of early-stage gastric cancer and premalignant lesions of the stomach, cure can be obtained in the treatment of gastric cancer. In our study, it was aimed to compare incidental biopsy with conventional endoscopy and targeted biopsy with I-scan endoscopy in the detection of intestinal metaplasia (IM), which is one of gastric premalignant lesions.

**Material and Methods:** In our study, 14 patients who were diagnosed with intestinal metaplasia within the last 6 months were performed firstly conventional endoscopy and then I-scan mode endoscopy at the same session and biopsies were taken. Demographic characteristics, clinical complaints, Helicobacter pylori (HP) positivity, and biopsy results were then evaluated. Statistical analysis was performed using Chi-square test to compare the categorical data. The SPSS 21.0 version software was used to calculate the p-value and the p-value below 0.05 was considered to be significant.

**Results:** Eight (57%) of the patients were male and 6 (43%) were female. The mean age was 58 years. Endoscopy indications were dyspepsia in 7 patients, epigastric pain in 4 patients, and anemia in 3 patients. HP was detected in 4 of the patients. Neuroendocrine cell hyperplasia was detected in 2 patients. In 4 of the patients, HP was detected. Neuroendocrine cell hyperplasia was found in 2 patients. While IM was not found through both techniques in 4 patients, there was IM in 10 patients. IM was detected in 10 patients with the I-scan mode, whereas it was observed in only 4 patients with conventional endoscopy (p: 0.023). It was concluded that I-scan endoscopy was more effective and successful than conventional endoscopy in diagnosing IM.

**Conclusion:** In this study, in which conventional endoscopy and I-scan endoscopy were compared, the superiority of I-scan endoscopy was demonstrated in the diagnosis and follow-up of gastric premalignant lesions. Of course, a standard follow-up procedure needs to be established and more extensive studies are required for more precise results. The use of I-scan endoscopy instead of conventional endoscopy should be kept in mind as a reliable and effective method, especially in patients at risk and in the follow-up of IM patients.

**Keywords:** I-scan endoscopy, intestinal metaplasia, conventional endoscopy

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## PP-0272 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Treatment of Esophageal Perforation and Retropharyngeal Abscess Associated with Foreign Body with Endoscopic Approach

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**Introduction:** Foreign bodies in the esophagus are not frequently encountered, and if accompanied by perforation, it is a problem that can cause serious morbidity and mortality. Because the narrowest part of the upper gastrointestinal system is the cervical part of the esophagus, attachments and perforations occur frequently in these regions. The most frequently encountered foreign objects are coin and toy pieces in children and inadequately chewed foods and bone-fishbone fragments in adults. In this study, it was aimed to present a case that was admitted to the emergency unit with perforation and retropharyngeal abscess associated with the ingestion of a foreign body that was stuck in the esophagus and that was diagnosed and treated endoscopically.

**Case:** A 54-year-old female patient was admitted to the emergency unit and taken under monitorization in the ENT clinic due to globus sensation, difficulty in swallowing, and pain following oral intake 2 days before. Because her complaints gradually increased and fever, hyperemia, edema and redness in the neck region developed, she was performed the computerized tomography and a foreign body with about 25 mm length and 5 mm thickness was detected at the oropharynx-cervical esophagus junction in the posterior prevertebral area. Retropharyngeal diffuse free air and multiloculated collection extending to the hypopharynx in the inferior and to the epiglottis in the superior were detected in the neighborhood of foreign body. This appearance was evaluated as perforation of the cervical esophagus and associated retropharyngeal neck abscess. The patient underwent endoscopic procedure under general

anesthesia and it revealed a bone fragment at the pharyngoesophageal and cervical esophagus junction, causing perforation by sticking into the anterior and posterior areas of the esophageal mucosa. The foreign body was released from the esophagus with the aid of endoscopic tripod and basket snare and taken out of the mouth with the help of a gastroscopic cap. Approximately 150 cc of purulent abscess fluid was drained from the esophageal perforation area and aspirated. The perforation area in the esophagus mucosa was closed with endoscopic hemoclips. The patient was initiated broad-spectrum antibiotherapy and she was followed-up for 2 days in the postoperative intensive care unit. The patient, whose swelling on the neck was reduced and fever was regressed, was taken into the clinic on the 3rd day. The control USG and CT scans of the neck and thorax were performed and the retropharyngeal abscess cavity was observed to have disappeared. On the 8th day after endoscopic intervention, oral liquid foods were started and on the 11th day of follow-up, the patient was discharged with healing.

**Conclusion:** Perforations due to esophageal foreign bodies constitute the clinical conditions with severe mortality and morbidity. Today, increasing endoscopic intervention opportunities and modern endoscopic equipment open new horizons in approaches to these cases. With these endoscopic interventions performed by experienced specialists, treatment and follow-up are possible without surgery.

**Keywords:** Esophagus, foreign body, perforation, endoscopy

## PP-0273 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Approach to Esophageal Foreign Bodies in a District Hospital: 2 Case Reports

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**Introduction:** Esophageal foreign bodies are more frequently seen in children and it can also be encountered in adult patients. In this study, we wanted to present our experience on 2 different cases of foreign bodies that we encountered in the district hospital.

### Case:

**Case 1:** A 54-year-old male patient was admitted to the emergency unit with retrosternal pain and stinging sensation. In the physical examination of the patient, who stated that he accidentally ingested a bone while eating, there was no abnormal finding. His laboratory values were normal. In the endoscopy performed in emergency conditions, a piece of bone attached to the esophagus at about 25 cm from the incisor teeth was observed. The bone piece caught with biopsy forceps was taken out. There were no abnormal findings in the clinic and laboratory values of the patient who was followed up for 2 days in the clinic. Then, the patient was discharged.

**Case 2:** A 14-year-old male patient consulted to the emergency unit due to the history of swallowing a coin and retrosternal pain. The chest X-ray showed a round object enhancing in the middle of the esophagus. In the endoscopy, it was seen that there was a coin hanging up in the esophagus at a distance of about 25cm. It was tried to be caught with a biopsy forceps, but it advanced towards the stomach. After several trials, it disappeared in the undigested food in the stomach. In the radiography taken immediately after the process, it was seen that the coin was already in the small intestine. The patient was recommended a potato diet. The patient who did not come to the control examination was called by phone and it was learned that the foreign body got out with defecation after about 36 hours following the ingestion.

**Conclusion:** Direct radiographs can detect most of the radiopaque foreign bodies, but food bolus impactions, fish or chicken bones, wood, plastic, glass and thin metal objects are not easily viewed. Surgery, which is a costly and invasive procedure, is avoided. In addition to being less invasive, endoscopic maneuvers are the primary treatment approach because of their technical simplicity, excellent imaging, and the ability to view other diseases simultaneously. If the swallowed object is impacted on the esophagus, it can lead to esophagitis, mucosal ulceration, bleeding, obstruction, and perforation. Endoscopic interventions performed within the first 24 hours give better results. However, the type and characteristic of the object, technical opportunities, and personal endoscopic experience are very important.

**Keywords:** Endoscopic approach, bone fragment, coin, esophageal foreign bodies

## PP-0274 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Endoscopic Management of a Rare Foreign Body in the Stomach

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**Introduction:** Swallowing foreign bodies is an important problem in psychiatric patients. In the literature, the removal of foreign bodies such as fishbone, fork and various metallic objects has been reported. The treatment is endoscopic removal of foreign bodies after diagnosis (1). Surgical approach is necessary in case of failure in endoscopic approach. In this article, we aimed to present the endoscopic removal of the swallowed watch in a patient having impaired hearing and receiving psychiatric treatment.

**Case:** A 25 year-old male patient with hearing impairment consulted to the emergency unit with the complaint of abdominal pain. Except for epigastric tenderness, his physical examination was normal. His laboratory findings were also normal. In the direct radiography, a round metallic object was detected. Emergency endoscopy was planned and a watch was detected in the stomach in the endoscopic examination. The object was successfully removed with an esophageal overtube approach under direct endoscopy.

**Conclusion:** Delay in the diagnosis and removal of sharp or large foreign bodies may lead to serious complications such as mucosal laceration, obstruction, bleeding and perforation. For the removal of large foreign bodies, esophageal overtube, which prevents the occurrence of esophageal injury with endoscopic approach, should be preferred in order to avoid mucosal laceration, perforation, and surgical treatment.

**Keywords:** Endoscopy, overtube, foreign body

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## PP-0276 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

### A Foreign Body in the Stomach: “Fork”

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A 22-year-old female patient was admitted to our emergency surgery outpatient clinic by asserting that she had swallowed a foreign body (fork). There was no abnormal feature in the physical examination. The image of the fork was viewed in the upper quadrant midline in direct abdominal x-ray in standing position. In the abdominal CT, a foreign body image (fork), the longest axis of which was measured as 12 cm, was observed in the stomach lumen, extending from the fundus to the corpus. There was no free liquid and air inside the abdomen. No radiological finding requiring emergency surgery was found. Gastroscopy was planned for the patient. From medicolegal aspect, the risks of the procedure were explained and the patient's consent was received. After attaching a cap for foreign body extraction, gastroscopy was performed. The 'fork' in the stomach was pulled into the cap by catching with polypectomy snare. In the control endoscopy performed after the removal of the foreign body, new pathology was not detected in the esophagus and stomach, except the superficial local bleeding. After the procedure, the patient was monitored for 24 hours in the hospital by stopping the oral intake. At the second 24th hour, the oral intake was started. The patient, who did not develop any complications, was discharged with the recommendations. In the control examinations, it was observed that the patient's general state and oral intake were natural.

**Keywords:** Endoscopy, gastroscopy, foreign body ingestion, fork

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## PP-0277 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

### A Solid Organ Pathology Diagnosed by Endoscopic Biopsy

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**Introduction:** The purpose of this study is to present the difficulties experienced during the diagnosis stage of a patient with a splenic mass and the advantage that endoscopic biopsy provides to the patient.

**Case:** A 55-year-old female patient was admitted to the outpatient clinic with the complaints of pain in the epigastric region, vomiting, and hiccup. There was sensitivity in the epigastric region and in the left upper quadrant of the abdomen in the patient's physical examination. There was no defense and rebound. The traube was closed. The patient was hospitalized to be examined. The laboratory results of the patient was as follows: Hb: 11.5 g/dl, Wbc: 7700 x 10<sup>3</sup>/µl, and Plt: 299 x 10<sup>3</sup>/µl. Her biochemical values were normal. The abdominal ultrasonography revealed an approximately 6 cm hypoechoic mass in the superior-medial segment of the spleen. In the abdominal tomography, a 9 cm lesion with necrotic areas in the upper pole of the spleen



and multiple lymph nodes showing conglomeration in the periceliac, paraaortic region were detected. In the abdominal MR, a mass lesion with necrotic center, the widest point of which was 10 cm, was observed in the upper pole of the spleen. It was stated that the mass was invasive to the stomach and diaphragm and also had suspected invasion to the liver.

A 19 mm diametered nodular lesion (metastasis?), which was thought to be located in the lung parenchyma and had a similar characteristic to the mass on the left costophrenic sinus localization, was described. Since there was no extraabdominal pathological finding in the patient, who was thought to have a lymphoproliferative pathology, a true cut biopsy was planned for the mass in the spleen after consulting to the department of hematology. The result of the true cut biopsy was reported as a spindle cell neoplasm. With this result, the diagnosis of lymphoproliferative disease was ruled out. The patient was discussed at the tumor council, and the total excision of the mass was recommended for the precise sub-typing of the spindle cell neoplasia. To determine the area of stomach invasion indicated in the radiology report, gastroscopy was scheduled for the patient. The gastroscopy revealed an about 2x1 cm fibrin-covered area at a distance of 3 cm from the esophagogastric junction. Considering that this was the area of the invasion, biopsies were taken from this area. The result of endoscopic biopsy was reported as the anaplastic variant of diffuse large-cell lymphoma originating from the non-germinal center. With this pathological result, the plan of surgery was abandoned and the patient was referred to the department of hematology.

**Conclusion:** In patients without peripheral lymph node, being thought to have lymphoma, and displaying invasion to the gastrointestinal system, endoscopic biopsy, instead of taking biopsy with laparotomy or laparoscopy, can be considered as a minimally invasive method that will help in diagnosis.

**Keywords:** Spleen, endoscopy, invasion, stomach

## PP-0278 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Who is Afraid of Endoscopy? How can the Patient's Anxiety be Resolved?

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**Objective:** Esophagogastroscope and colonoscopy have an important role in the screening, diagnosis and follow-up of related regional diseases. Due to fear and anxiety of patients for both methods, the number of patients who do not come to the appointment is not negligible. From another point of view, it is known that anxious and fearful patients experience more compliance problems during endoscopic procedures. In this questionnaire study on patients for whom endoscopy was planned, it was aimed to reveal the frequency, causes and characteristics of anxiety caused by endoscopic procedures.

**Material and Methods:** The study included adult patients who came to the General Surgery Endoscopy Laboratory for esophagogastroscope and/or colonoscopy appointment and accepted to attend the study. The patients who had impaired general state, whose states of consciousness were not suitable for giving consent and replying the questionnaire, who refused to attend the study, and who had a known anxiety disorder or psychiatric disease were excluded from the study. In the endoscopy unit, the patients included in the study were asked to complete the two questionnaire forms under supervision before the procedure.

In the first questionnaire form, in addition to the questions about the patients' demographic data, endoscopic experience, whether they were afraid of endoscopy, and whether they had knowledge about the procedure to be performed, the item "Evaluate your experience of endoscopy in terms of its difficulty for you by rating with the scores from 1 to 5 (1: very comfortable, 5: very difficult)", which would be answered after the procedure, was included. The second questionnaire form was the State-Trait Anxiety Inventory for Adults™ (STAI-AD). The STAI-AD consists of two main parts. While the S-Anxiety section seeks to assess the ongoing anxiety state of the individual, the T-Anxiety section aims to assess the state of anxiety over the situation in which it occurs.

**Results:** A total of 90 patients admitted between January 2017 and January 2018 were included in the study. Thirty-nine of the patients were male (43.8%) and 51 (56.2%) were female. While esophagogastroscope was performed in 90.3% of the patients, colonoscopy was performed in 8.1% and both procedures were performed in the same session for 1.6%. The mean age of the patients was found to be 46.56±15.53 years. In female patients, the fear of endoscopy was higher than in male patients (39/51, 79.6% vs 18/39, 45%, p=0.001). In the patients adequately informed before the procedure, anxiety associated with the procedure was found to be less (p <0.05). The recognition of the physician who performed the procedure led to decreased anxiety level (p <0.05). There was no relationship between anxiety and fasting duration before the procedure. When the test result was accepted as the gold standard, the sensitivity was 81%, specificity was 57%, positive predictive value was 74%, and negative predictive value was 67% in terms of anxiety for the question "Are you afraid of endoscopy?" It was detected that the patients administered sedation were more comfortable during the procedure than those not given sedation (p <0.05).

**Conclusion:** In the majority of patients saying "I am afraid of endoscopy", anxiety for the procedure develops. Fearing from the procedure and not complying with the procedure because of this fear are an important vicious cycle of this process. In order to resolve this situ-

ation, particularly good communication should be established with female patients expressing their fear and they should be informed about the process by the physician who will apply the procedure. If possible, the procedure should be carried out under sedation.

**Keywords:** Anxiety, endoscopy, colonoscopy.

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## PP-0279 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# The Histological Relationship Between Gastric Cancer and Helicobacter Pylori

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In the final report of the meeting held with experienced cancer specialists from 11 countries in 1994, the International Agency for Research on Cancer reached the conclusion that H. pylori was carcinogenic for the stomach. The first studies investigating the relationship between cancer type and bacteria showed higher rates of H. pylori infection in intestinal type gastric cancers than in diffuse types. Then, the rate changed in favor of the diffuse type of cancers.

We aimed to compare the frequency of H. pylori infection in our gastric cancer cases with the control group. In our study, the presence of H. pylori in the stomach was proven by histological methods. Moreover, the relationship between the localizations and types of cancer and H. pylori infection was also investigated. The study included 60 patients with gastric carcinoma, for whom local ethical committee approval was received, who were diagnosed in the İstanbul Training and Research Hospital Endoscopy Unit, and 40 of whom were operated in the Department of General Surgery at different times. The main complaints and their durations, the habits of tea and alcohol consumption and smoking, familial history, and previous gastric surgery were questioned. The localization, macroscopic appearance, histology, and spread of tumor were determined in the operated cases. In the patients undergoing stomach resection, sections taken from both the tumor and the surrounding mucosa during operation were firstly fixed with 10% formaldehyde. Then, it was transformed into paraffin embedded blocks and 4-5 micron-thick sections were taken. Histological examination was performed by hematoxylin-eosin staining through conventional methods. In addition, the samples taken from the surrounding mucosa were stained with modified Gimsa and the presence of H. pylori was investigated. In 40 cases undergoing resection, tumors were divided into 3 types according to the Lauren classification. Esophagogastroduodenoscopy was performed in the Endoscopy Unit in the control group including 15 patients who were admitted to İstanbul Education Hospital Outpatient Clinic of General Surgery and who had no upper gastrointestinal system complaints. At least 2 biopsy specimens taken from the stomach antrum were sent to İstanbul Education Hospital Pathological Research Laboratory for paraffin section in 10% formaldehyde. Here, histological sections were examined in terms of the presence of H. Pylori by Gimsa staining and in terms of the presence of gastritis by H. Eosin staining. The relationship between the tumor localization and H. Pylori was examined. In 40 patients undergoing resection, the histological presence of H. pylori in the neighbor tissue was detected in 28 patients (70%). When all the cases were evaluated together (60 patients), H.pylori infection was found in 40 (66.7%) patients. In the comparison of the intestinal type and diffuse type, although the rate of H. Pylori infection seemed to be higher in the diffuse type, there was no statistically significant difference. Histological presence of H. pylori was investigated in 15 cases of the control group. H. pylori was found to be positive in 11 cases (73.3%). All of the H. pylori (+) patients had chronic active gastritis. Of gastritis cases, 8 were diffuse, 2 were superficial, and 1 was atrophic.

In conclusion, there was a significant correlation between H. pylori positivity and gastric cancer, and both intestinal and diffuse gastric cancer cases had H. pylori infection. No statistically significant difference was found in terms of the frequency of H. Pylori in the comparison with the control group.

**Keywords:** Helicobacter pylori, stomach, cancer

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## PP-0280 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Can Cannulation Failure be Prevented During Endoscopic Retrograde Cholangiopancreatography?

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**Objective:** Endoscopic retrograde cholangiopancreatography (ERCP) is often used in the diagnosis and treatment of hepatic, biliary and pancreatic diseases. Cannulation failure, however, requires other interventions. The aim of this work is to create the parameters that can be used to predict failure during ERCP.

**Material and Methods:** Case control study was planned. The ERCP procedures performed between December 2016 and February 2018 were evaluated. Recurrent interventions and their causes and cannulation states were recorded. The factors affecting cannulation were examined. Descriptive analyses were used for statistical evaluation. The Chi-square test for categorical data and t-test for continuous data were used. In the analyses, the p value of 0.05 or less was considered to be statistically significant.

**Results:** A total of 458 ERCP procedures were performed in 288 patients during the study period. Of the patients, 159 were female and 129 were male. The female/male ratio was 1,2 and the mean age was  $59 \pm 17,9$  years (age range: 17-105). When ERCP indications were evaluated, it was observed that the procedure was performed in 258 patients (89.6%) due to choledocholithiasis. In the first process, selective choledochal cannulation was successful in 257 (89.3%) patients, with ERCP catheter in 229 patients and with auxiliary methods in 28 patients. In 236 patients, the cannulation was successful in less than 15 minutes. In 31 (10.7%) patients, cannulation failed in the first process. There was no difference among the failed patients in terms of age and gender (p: 0,270, 0,256, respectively). The causes of failure were previous stomach-duodenum surgeries, the duodenal diverticulum, and pancreas head tumor. Cannulation with planned recurrent procedures was successful, except in 2 patients. In the first process, 264 patients were diagnosed, particularly with choledocholithiasis (n: 214).

**Conclusion:** It has been shown in literature that the gender of the patient and structural differences such as duodenal diverticulum do not affect the success of cannulation during ERCP. The Billroth II and Roux-en-Y gastrojejunostomy operations decrease the success rate of cannulation. The results of our study are similar. Our cannulation success rate is consistent with the success rate of the large series presented in the literature. It is thought that there is a correlation between the experience of endoscopists and cannulation success.

**Keywords:** ERCP, cannulation, choledocholithiasis

## PP-0281 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Determination of the Incidence of Lipomas with the Localization of the Upper GIS; a Single-center Retrospective Study

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**Objective:** Gastrointestinal (GI) lipomas are benign, usually single, slow-growing, nonepithelial tumors. These lesions are most commonly located in the colon, and they are also found in the esophagus, in the small intestines, and very rarely in the stomach. Although not a very sensitive feature, the identification of the "pillow sign" in the diagnosis is 98% specific.

In this article, we aimed to determine the incidence of incidentally detected submucosal lipomas in the endoscopic examination of the upper GIS performed in our clinic.

**Material and Methods:** The cases with incidentally detected lipoma in 36695 endoscopy examinations of the upper GIS in the endoscopy unit of Bakırköy Dr. In Sadi Konuk Training and Research Hospital between August 2010 and February 2018 were retrospectively evaluated in terms of their demographic data, lesion location, and lesion size.

**Results:** In the study, a total of 103 cases, 55 of which were women (52.8%), were examined. The mean age was 57.6 years (range 20-83). The lesions were localized in the esophagus in 25 cases, in the fundus in 26 cases, in the corpus in 9 cases, in the antrum in 28 cases, and in the duodenum in 15 cases. The mean lesion diameter was found to be 8.9 mm (2-30). Endoscopic ultrasonography was performed to confirm the diagnosis in all cases detected to have incidental lipoma.

**Conclusion:** Lipomas are usually detected incidentally during endoscopy, and resection or observation is not necessary after diagnosis as long as they are not symptomatic. In the literature, it is reported that the upper GIS-located lipomas are rare, but their incidence is not known. We think that this study, which we aimed to give an idea about the frequency of lipomas for determining the incidence based on the data of our clinic, should be performed as multi-centered.

**Keywords:** Submucosal lesion, lipoma, endoscopy

## PP-0282 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# The Effect of Anxiety on the Dosage of Sedative in Patients That Will be Performed Esophagogastroduodenoscopy

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**Objective:** It was aimed to investigate the effect of pre-procedural anxiety levels on the doses of sedative drugs in patients undergoing esophagogastroduodenoscopy (EGD) for upper gastrointestinal symptoms under sedation.

**Material and Methods:** Patients planned to be performed diagnostic EGD for the upper gastrointestinal system examination in the Arnavutköy State Hospital, Endoscopy Unit between January 2016 and June 2016 were included in the study. The patients were evaluated with the Spielberger's State-Trait Anxiety Inventory (STAI-S, STAI-T) scale by the psychiatrist at the same hospital before the procedure and their anxiety scores were determined. Sedation was administered and followed by the same anesthesiologist in all cases. Sedation was initiated by administering 0.05 mg/kg midazolam and 1 mg/kg propofol to each case. Whether the patients were applied sedation enough for the process and whether additional dosage was required were decided by the anesthesiologist and the endoscopist according to the patient's compliance and the Observer's Assessment of Alertness/Sedation Scale (OAA/S). At the beginning and at the end of the procedure, the patient was evaluated with OAA/S every 1 minute. Repeated doses of 10 mg or 20 mg propofol were administered as needed to maintain the initial sedation level. The procedures were completed once the moderate sedation level was achieved as the OAA/S score would be between 2 and 4. The cases were divided into two groups, as those requiring additional doses and those not requiring additional doses.

**Results:** 210 consecutive cases planned to be performed EGD (F/M: 79/131, the mean age: 40.5±11.5 years) were included in the study. The mean body mass index (BMI) of the cases was 27.8±6.2. In EGD results, 165 gastritis, 32 antrum and/or bulbous ulcer, 11 alkaline reflux gastritis, 41 cardioesophageal insufficiency, 12 hiatal hernia, and 2 gastric cancers were detected. In the means of anxiety scores, the mean state anxiety score was 40.28 and the mean trait anxiety score was 40.18. The mean administered propofol dose was 94.8±30.7 mg. An additional dose of sedation was needed in 67 (31%) of the cases. A statistically significant difference was detected between the state and trait anxiety scores with additional sedation dose administration ( $p < 0.05$ ). When the correlation analysis of the patients applied additional doses was examined, it was seen that the need for additional dose of medication was affected by age, body mass index, and state and trait anxiety scores ( $p < 0.005$ ). The rate of additional dose requirement in young patients with low BMI and high anxiety scores were significantly high. When the state and trait anxiety scores were >40, the rate of additional dose medication increased by 4 and 5 times. None of the patients developed complication associated with endoscopy or sedation.

**Conclusion:** The administration of sedation by an anesthesiologist may be more appropriate both for the patient and for the endoscopist because the doses of the drugs used for sedation may be inadequate and an additional dose of medication may be needed in the endoscopic procedures of young patients with low BMI and high anxiety scores. For the definite results, there is a need for randomized controlled trials involving larger patient groups.

**Keywords:** Anxiety, endoscopy, sedation

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## PP-0283 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Our Experience in the Competency Process of 25 Trainees in Surgical Endoscopy Training

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**Objective:** In this observational study, it was aimed to examine the stages of competency in performing upper and lower gastrointestinal system endoscopy in 25 trainees who received a 3-month endoscopy course in Antalya Training and Research Hospital, Endoscopy Unit between 2013 and 2017.

**Material and Methods:** In the framework of rapid orientation program applied on the first two days of the training, our trainees, all of whom were surgeons that were able to perform laparoscopic surgery, were taught on the device functions on the defect devices and also, they were verbally instructed about the steps of the process and the maneuvers required to be done for progression by repeating in every process. On the following days, they were involved in the process of exit stage in the upper GIS endoscopy and tried retroflexion maneuver and pylorus cannulation on the cases. When the lecturers were convinced that the trainees gained sufficient competency on the device, they also started to perform the entrance procedures (6th-10th training days). At the 3rd week of the training, they were included in the exit procedures in the lower GIS endoscopy and they started

to perform the lower GIS endoscopy under supervision at the 4th or 5th weeks of their training in accordance with the trainers' opinions.

**Results:** In the 4th week of the training, all the trainees gained the competence to perform the standard upper GIS endoscopy on their own. And in the lower GIS endoscopy, all the trainees could perform the cecal intubation on their own by the end of the 5th week. During the 3-month course, the intervention of the trainer at the lower GIS endoscopy was needed, even at a decreasing frequency. On the other hand, in the upper GIS endoscopy, external interference was required only in rare situations at the end of the first month.

**Conclusion:** Three-month full-time training in surgical endoscopy training seems to be sufficient for a general surgeon to perform upper and lower GIS endoscopies competently.

**Keywords:** Surgical endoscopy, endoscopy training, endoscopy certification

## PP-0284 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Basket Impaction in ERCP and Our Treatment Experience

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**Introduction:** Endoscopic retrograde cholangiopancreatography (ERCP) is currently used as the first choice in the treatment of choledochal stones. Following the sphincterotomy procedure, balloon catheter, basket catheter and stone crushing forceps are used to remove the stone from the choledoch. Basket impaction is a rarely encountered complication. In this article, our approach to the case of basket impaction occurring during the removal of the stone from the choledoch is presented.

**Case 1:** A 46-year-old female patient was admitted to our clinic with the complaints of jaundice and abdominal pain. In the examinations of the patient, who had undergone cholecystectomy 2 months ago, the levels of bilirubin and cholestasis enzymes were detected to be elevated. The patient was performed MRCP and found to have a 8 mm choledochal stone in the choledoch. ERCP was scheduled for the patient and she was taken into the procedure. In the ERCP procedure, choledochal stone was viewed. Following a proper sphincterotomy, the stone was tried to be removed by using a balloon catheter, but it failed. Then, a basket catheter was inserted and the stone was taken into the basket, but it was noticed that the catheter did not come out. The catheter was pushed back into the proximal area and the stone was tried to be removed. However, it was unsuccessful. A new catheter was sent again along the basket catheter and the balloon catheter was advanced with the help of a guide. The basket was attempted to be pulled down with the balloon catheter, but it was not successful again. In order to avoid an extra complication, the patient was taken into emergency surgery. A choledochal exploration was performed and the basket catheter and stone were extracted from the choledoch. The operation was terminated after doing T-tube repair. At the end of the 21st day, the patient was performed cholangiography from the t-tube and no extra pathology was observed and the t-tube was removed.

**Case 2:** A 57-year-old female patient was admitted to our clinic with the complaint of jaundice. She was diagnosed with choledocholithiasis and ERCP was planned for the patient. She had a 1.2 cm stone in the choledoch. Following the sphincterotomy, the stone was tried to be removed with a balloon catheter. Because it failed, basket catheter was tried. After taking the stone into the catheter, the catheter was squeezed in the distal choledoch. The choledoch was attempted to re-cannulate to remove the stone, but it did not succeed. The patient underwent emergency surgery and cholecystectomy was performed, and the basket catheter and stone were removed from the choledoch. The choledoch was repaired by placing t-tube. Cholangiography was performed from the t-tube at the end of the 21st day and the t-tube was removed without an extra pathology.

**Conclusion:** ERCP is a commonly used treatment method in primary and secondary choledochal stones. In the literature, it is recommended to apply a stent to the choledoch for the stones over 1.5 cm when the stone cannot be removed with a balloon catheter. However, a basket catheter was tried because it was thought that a stone of 8mm and 1.2cm diameter could be removed from the choledoch. When a basket impaction occurs, an extra complication can be experienced by attempting to remove the basket during the ERCP procedure. At this stage, open surgical intervention should be kept in mind.

**Keywords:** ERCP, basket impaction, choledochal stone

## PP-0285 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Contributions of Endoscopy Training to a Surgeon

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**Objective:** The aim is to share the experience of a surgeon, who was inexperienced in flexible endoscopy, after the course of surgical endoscopy training organized in Afyon Kocatepe University, Faculty of Medicine in the framework of continuing medical education and continuing professional development activities by the Turkish Society of Surgery.

**Material and Methods:** Patients admitted to the outpatient clinic and clinic of general surgery in Afyon Kocatepe University Medical Faculty between 28.09.2017 and 27.12.2017 were included in the study. The patients that were applied emergency surgical endoscopy at the weekend were excluded from the study. Patients' demographic data, procedures and complications were presented.

**Results:** The gains of a surgeon, who completed the surgical residency between 2009 and 2014 and received education on rigid rectosigmoidoscopy anoscopy theoretically and practically during residency, but did not have experience on flexible surgical endoscopy, after a 3-month training were shared. Four lecturers work full-time in Afyon Kocatepe University Faculty of Medicine. Training on ERCP is given in the department of general surgery within the structure of the university. Following the necessary theoretical training in the 3-month period, the procedures were accompanied for 1 week. Then, sedation with midazolam and/or ketamine and analgesia with pethidine were provided by the surgical team and all procedures were performed. At the end of the training period, 282 upper gastrointestinal system endoscopies (Female: 131, Male: 151) and 266 lower gastrointestinal system endoscopies (Female: 125, Male: 141) were performed. Twelve percutaneous endoscopic gastrostomy (PEG) procedures were performed (F: 5, M: 7). Gastroscopic balloon dilatation was applied in 6 patients due to anastomotic stricture and in 4 patients due to tight fundoplication. No complications were encountered in the upper GIS endoscopy. In the lower gastrointestinal system endoscopy, 23 rectosigmoidoscopies were performed for lower rectal anastomosis and ileal pouch control. Balloon dilatation was applied to 8 cases in rectosigmoidoscopy. In 243 full colonoscopy procedures, ileal intubation was performed in 32 cases. In 18 cases, 26 snare polypectomy procedures were performed. Partial excision was applied to one colonic submucosal mass. At the 40th hour after the procedure, the patient was operated at the external center due to colonic perforation and the patient was discharged with recovery. In other cases, punch biopsies were applied. No additional complications were encountered.

**Conclusion:** In emergency endoscopic procedures, gastrointestinal bleeding was the most important cause of admission and 12 cases were taken into the procedure but no therapeutic treatment was applied.

**Keywords:** Endoscopy, training, course, Turkish, surgery, society

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## PP-0286 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Endoscopic Treatment of Malignant Polyps Developing After Ureterosigmoidostomy

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**Objective:** Ureterosigmoidostomy is a diversion procedure performed after bladder cancer. Recently, it has been abandoned due to the development of urinary infection, renal insufficiency, and cancer at the site of anastomosis. Although rare, it can still be applied in some cases. In our video presentation, we aimed to demonstrate the treatment of malignant polyp (Haggitt classification 2nd level), which developed after ureterosigmoidostomy, with colonoscopic polypectomy.

**Material and Methods:** A 44 year-old male patient had undergone ureterosigmoidostomy 5 years ago. Endoscopic excision of the colon polyp detected in colonoscopy was demonstrated in the monitorization. With colonoscopic polypectomy, the polyp was completely excised over the colon mucosa with its stalk. Early complications were not seen after the procedure.

**Results:** In pedunculated polyps, it is recommended to perform the operation by excising the area where the stalk is joined with the mucosa. The follow-up and treatment are decided after evaluating the pedunculated polyps in accordance with the Haggitt classification considering the pathological diagnosis. In our case, the patient was evaluated to be Haggitt level 2. No additional pathology was detected in the abdominal tomography. Colonoscopic polypectomy was considered to be adequate for treatment. The patient was followed up.

**Conclusion:** Colorectal malignant polyps can be treated endoscopically. Polypectomy should be performed on the polyps with malignant features by involving their stalks because invasion can occur in the stalk of the lesion or mucosa. The decision of follow-up and treatment can be made in accordance with the Haggitt classification by considering the pathological results, particularly in pedunculated polyps.

**Keywords:** Ureterosigmoidostomy, malignant polyp, polypectomy

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## PP-0287 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Does 'Endoscopic Clip' Help Surgeon in the Management of Bariatric Surgery Complications?

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**Objective:** In this study, it was aimed to present the application of endoscopic clip in the treatment of leakage after bariatric surgery.

**Material and Methods:** The patients followed for fistula after bariatric surgery between February 2013 and November 2017 were retrospectively examined. Fourteen patients that were applied endoscopic clipping because their fistula orifice did not close or they could not tolerate the stent were evaluated. Their demographic data, BMI, comorbidities and previous operations were analyzed. Clinically suspected cases were examined by vital signs, physical examination, radiological examinations, and gastroscopy.

**Results:** The mean age of the 14 cases, 3 of whom were male, was 33 years. The mean BMI was 48.7 kg/m<sup>2</sup>. There were 3 cases with a history of diabetes mellitus (DM) and 5 cases with a history of hypertension (HT). LSG was performed on the patients, except one who was applied gastric plication and another applied mini gastric bypass. The physical examinations showed fever, abdominal pain radiating to the left shoulder, tachycardia, and tachypnea. In the iv oral contrast-enhanced tomography, contrast extralumination at the level of the esophagogastric junction and perisplenic abscess were observed. The abscess was percutaneously drained under the guidance of interventional radiology. After drainage, clips were applied to 14 cases with gastroscopy. Liquid intake was started at the 2nd hour after the procedure. After the antibiotic treatment was regulated, patient was discharged with the follow-up of the drain. The drains of the patients whose clinical and radiological follow-ups showed no abscess were removed. The patients without any need for additional intervention were included in the routine control program.

**Conclusion:** Endoscopic clip application is an alternative method in the treatment of leakage occurring after bariatric surgery.

**Keywords:** Bariatric surgery, endoscopy, fistula

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**PP-0288 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]****Endoscopy Experience in the Department of General Surgery at Kayseri Training and Research Hospital****Osman Çelik, Ali Can Yalı, Saliha Karagözeren, Ömer Topuz, Tamer Ertan**

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**Objective:** Endoscopy has an important place in the diagnosis of gastrointestinal diseases. In this article, we aimed to present the results of the biopsies taken during endoscopy procedures performed within one year in the endoscopy unit of our general surgery department.

**Material and Methods:** In 2017, 1,560 patients were performed upper GIS endoscopy in a year. Of these patients, 715 were performed biopsy. The results of the biopsies were evaluated. The mean age of the patients was 49 (15-91) years. The number of female patients was 810 and the number of male patients was 750.

**Results:** The results of the biopsies were as follows: Helicobacter pylori in 450 patients (60%), Gastritis in 170 patients (23%), Intestinal metaplasia in 58 patients (8%), hyperplastic changes in 14 patients (2%), adenocarcinoma in 13 patients (2%), peptic ulcer in 9 patients (1%), esophagitis in 8 patients (1%), duodenitis in 4 patients, chemical gastritis in 6 patients, foveolar hyperplasia in 5 patients, diffuse large B-cell lymphoma in 2 patients, necrotic exudate in 3 patients, lymphoid hyperplasia in 2 patients, alkaline reflux gastritis in 2 patients, undifferentiated epithelial dysplasia in 1 patient, squamous epithelial polyp in 1 patient, and normal biopsy results in 14 patients (2%). At the end of the endoscopies, no complication requiring medical treatment developed.

**Conclusion:** Upper GIS endoscopy is a highly effective diagnostic and treatment procedure in the demonstration of possible lesions, which is frequently used in recent years and has low rate of complications. General surgeons can safely apply the procedure with adequate training and, at the same time, treat the possible complications very quickly and effectively. The biopsy results include a wide spectrum of diseases ranging from infectious processes to malignancies. Endoscopic procedures are an effective diagnostic tool that helps surgeons to strengthen their hands in the treatment of existing pathologies and for surgical decision-making and prevents unnecessary procedures.

**Keywords:** Endoscopy, biopsy, general surgery

## PP-0289 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Case Report on Bilateral Pneumothorax Developing After Endoscopic Retrograde Cholangiopancreatography

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**Introduction:** Endoscopic retrograde cholangiopancreatography (ERCP) is a technique that is frequently used in the diagnosis and treatment of biliary - pancreatic duct and periampullary region diseases. In this method, life-threatening complications with high morbidity and mortality can occur as well as those that are benign. The complication rate is 4-10% and the mortality rate is 0.4%. With the cannulation of ampulla of Vater, giving contrast agent and additional interventional procedures, serious complications such as pancreatitis, hemorrhage, cholangitis, perforation and sepsis can occur at the rate up to 10%. Duodenal perforation due to ERCP is a life-threatening complication that is seen at the rate of 1-2% and results in mortality at the rate of 16-18%.

In this case, a case undergoing ERCP due to obstructive icterus and then developing acute abdomen, pneumothorax and subcutaneous emphysema was presented with the literature.

**Case:** A 43-year-old male patient having the complaints of pain in the right upper quadrant for 2 days and jaundice for the last one day was hospitalized in the clinic with the diagnosis of obstructive icterus. In the routine blood analysis, the value of hemoglobin was 14 g, leucocyte was 6700/mm<sup>3</sup>, total bilirubin/direct bilirubin was 7.5/4.61, AST was 365, ALT was 793, BUN was 9.2, and creatinine was 1.04. Because the MRCP performed on the patient revealed an appearance consistent with several sub-centimetric stones in the middle part of the choledoch, ERCP was planned. The stones were tried to be removed with ERCP and bile and biliary mud were observed. Although the process was terminated without any complication, the patient was performed portable PA AC radiography due to acute abdomen symptoms, respiratory distress, and subcutaneous emphysema that occurred while the patient was being followed up in intensive care. A chest tube was placed to the left lung because of the detection of bilateral pneumothorax in the graph. Then, the patient was taken into an emergency operation. During laparotomy, contamination was observed in the retroperitoneum. However, since there was no appearance consistent with perforation, cholecystectomy, choledocotomy, and T-tube drainage were performed. The operation was terminated and the patient was taken to the intensive care unit for follow-up.

**Discussion:** Pneumothorax, pneumoperitoneum, pneumomediastinum, subcutaneous emphysema, and pneumo-retroperitoneum are rare complications developing after ERCP, but they have high mortality and morbidity risk. In order to determine the anatomical localization of the perforation, the severity of the picture and the way of the treatment, Stapfer et al. divided the duodenal perforations associated with ERCP into four groups. In our case, it was found that air leak to the retroperitoneum triggered bilateral pneumothorax, but the duodenal perforation was not a visible cause and spontaneous regression was observed postoperatively. The diagnosis of duodenal perforations can be established through contrast-enhanced graphs of the upper gastrointestinal system, taken during or after ERCP. Direct abdominal X-ray after endoscopy and abdominal CT are other diagnostic methods.

**Conclusion:** Although ERCP is widely used and practiced in experienced hands, it rarely causes complications with high mortality. As seen in our case, it is important to remember that at least 24-hour intensive care follow-up should be performed after ERCP and we should be cautious for the risks of bleeding, perforation and pancreatitis.

**Keywords:** ERCP, pneumothorax, perforation

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## PP-0290 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Our Endoscopic Clip Experience in the Treatment of Perforation and Hemorrhage

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**Objective:** Endoscopic clip method for gastrointestinal system (GIS) bleedings and perforations is a minimally invasive treatment method alternative to surgical treatment. In this study, we aimed to present our 3-year endoscopic clip experience in our clinic.

**Content of Video:** Videos containing endoscopic images of the clips applied in the treatment of GIS perforations, hemorrhages and anastomosis leakages were added.



**Conclusion:** The widespread use of endoscopic procedures and increased experience have led to an increase in the use of minimally invasive endoscopic interventions. Today, the frequency and diversity of endoscopic procedures for therapeutic purposes are gradually increasing. They are alternative to surgical treatment in many cases such as endoscopic mucosal resection, endoscopic submucosal dissection, transanal endoscopic procedures, antireflux procedures, foreign body extraction, and clinical practices with stents, balloons and clips. Endoscopic clip method is a reliable and successful method for the treatment of GIS bleeding, perforations and anastomosis leakages in experienced hands.

**Keywords:** Anastomosis leakage, OTSC clip, GIS hemorrhage

## PP-0291 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Endoscopic Removal of Jackson-Pratt Drain Migrated to the Stomach

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**Introduction:** There has not been much decrease in the use of surgical drains in the intraabdominal area despite the perioperative treatment protocols (ERAS, etc.), which have recently been mentioned more frequently. Surgical drains need to remain for a long time due to illness in some cases and sometimes due to the patient-related reasons. Accordingly, drain-associated complications may arise.

**Case:** A 45-year-old male patient was admitted to the outpatient clinic of general surgery with the complaint of abdominal pain. The MR and CT revealed a 3-cm cystic mass in the distal area of the pancreas. The patient was performed laparoscopic spleen-preserving distal pancreatectomy. Two Jackson-Pratt drains were placed in the pancreatectomy lodge. During the follow-up, grade A pancreatic fistula developed in the patient. For this reason, the patient was followed up with the current drain. The patient, who did not visit for control examinations for a long time, consulted due to the complaint of increased output of gastric contents from the drain after 4 months. The patient was ingested methylene blue and it was seen to come from the drain. Then, the patient was performed endoscopy, which revealed that the end portion of the drain was free in the stomach lumen. Under endoscopic vision, the drain was removed directly. In this study, we aimed to present the video of this case.

**Conclusion:** Migrations of the surgical drains placed in the neighborhood of intestinal organs and staying there for a long time to the luminal region are possible. Due to tract occurring in these cases, the controlled removal of the drains after eliminating the perforation clinic usually does not pose a risk for the patient.

**Keywords:** Drain, endoscopy, migration

## PP-0293 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Rectum Injury Penetrating to the Mesorectum: A Rare Cause of Lower Gastrointestinal System Bleeding

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Lower gastrointestinal (GI) system hemorrhage refers to bleeding originating from a region in the distal part of the Treitz ligament. Lower GI system hemorrhages can manifest themselves in different ways (anemia, fecal occult blood, etc.), but some can be acute bleedings which can be life-threatening. In this case report, it was aimed to present chronic rectum perforation, which a rare lower GI system hemorrhage. Our case was a 94-year-old male patient with a history of Alzheimer's disease, coronary artery disease, and aspirin use. He was brought to the emergency unit because of the presence of blood in the diaper. The patient was assessed by the emergency department. She had no tachycardia, hypotension, and abdominal pain. At admission, the value of Hgb was 13.4, Hct was 41.5, PLT was 110000. Biochemistry and coagulation parameters were normal. The physical examination revealed that all the abdominal quadrants were normal in palpation. External hemorrhoids and bright-color bleeding were observed at the rectal examination. The patient was hospitalized for follow-up. In the control analysis after 24 hours, Hgb value was 9,1 and Hct value was 27,7. Colonoscopy was performed. A 10 mm perforation area with epithelialized edges having a blood leakage was observed at the 15 cm proximal of the anal canal. The leaking hemorrhagic area was cauterized. Two hemoclips were placed in this area. The bleeding was observed to have stopped. In the advanced age group, GIS hemorrhages can be seen more frequently due to the comorbidities and the medications used (NSAID, antiplatelet, anticoagulant, etc.). As a matter of fact, the use of NSAIDs and antiplatelet drugs in rectal perforations without definite etiology can cause bleeding.

**Keywords:** Advanced age, alzheimer, rectum, penetration

## PP-0294 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# 1416 Endoscopic Retrograde Cholangiopancreatography Procedure Analysis

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**Introduction:** Endoscopic Retrograde Cholangiopancreatography (ERCP), an irreplaceable diagnostic and treatment method for bile duct diseases, is an important element of General Surgery practice. In our study, the ERCP procedures performed at the Endoscopy Unit of Health Sciences University Bağcılar Training and Research Hospital, General Surgery Department were evaluated.

**Material and Methods:** The ERCP procedures performed at the Endoscopy Unit of Health Sciences University Bağcılar Training and Research Hospital, General Surgery Department between January 2010 and December 2017 were retrospectively evaluated in electronic environment.

**Results:** In this period, 1416 ERCP procedures were performed. Of them, 581 (41%) were performed on males and 835 (59%) on females. It was applied twice in 178 patients, 3 times in 58 patients, 4 times in 32 patients, and 5 times and more in 23 patients. The mean age was  $58.8 \pm 18.6$  (16-96) years. The procedures were performed by 6 experienced general surgeons. Cannulation was successfully carried out in 78.6% of the procedures, but it could not be performed in 21.4% of the procedures. In 21.1% of the procedures, precut was performed with needle-tip sphincterotomy. While the mean diameter of the cannulated choledoch was  $13.51 \pm 4.9$  mm (5-35), the choledochal stone was found in 680 of these processes. The mean diameter was  $12.98 \pm 4.55$  mm in 451 male patients whose choledochs were measured and  $3.89 \pm 5.08$  mm in 636 female patients. The diameter of the female patients was significantly larger than the male patients ( $p < 0.02$ ). In 536 procedures, a flat stent or stent with curved ends were used. In these procedures, the mean diameter of the choledochs was  $14.89 \pm 5.5$  mm (6-35). While stent was applied due to residual or unremovable stones in 381 patients, 155 patients had other pathologies. The diameter of the choledoch in the patients who underwent stenting was significantly larger than that of those without ( $p < 0.01$ ). In 25.5% of 404 patients undergoing ERCP with the pre-diagnosis of choledocholithiasis, choledochal stone was not detected during the procedure. As the age progressed, the diameter of the choledoch increased and it was found to be correlated with age ( $r: 0.302$ ). While stone was detected in 72.9% of the patients who were older than 65 years, this rate was 60.5% for the patients below 65 years old. The difference was statistically significant ( $p < 0.01$ ). At the end of the procedures, mortality was observed in 3 patients.

**Conclusion:** With the increase of the age average in the general population, the frequency of the benign and malignant diseases of the hepatobiliary system is also increasing in parallel. First of all, ERCP, which has been used for diagnostic purpose, leads the minimally invasive approaches in the pathology of hepatobiliary system with the developments in technology. The management of patients can be carried out as a whole with endoscopic interventions, which are irreplaceable elements of general surgery practice, and ERCP. ERCP is a minimally invasive endoscopic procedure successfully performed by general surgeons. It should be considered to be added to the core training program that general surgeons, who constitute the main team managing the complications in terms of patient health and safety, must take.

**Keywords:** ERCP, choledocholithiasis, stent

## PP-0295 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Decubitus Ulcer Developing due to Bezoar and Bulbus Perforation Secondary to Bezoar Fragmentation: Case Report

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A 55-year-old patient with a psychiatric disease was evaluated by the department of gastroenterology with the picture of gastric outlet obstruction and a bezoar on the bulbus at the entrance of the pylorus was detected. After the endoscopic fragmentation of the bezoar, the acute abdomen developed after the procedure. The patient whose CT revealed perforation was operated. In the peroperative endoscopy, it was noticed decubitus developed due to bezoar at the post-pyloric bulbus in the area where the bezoar was fragmented and there was a perforation from this point. The perforation area was repaired by the Graham technique. No postoperative complication developed. Although similar cases are found in the literature, we think that our case has a clinical presentation that can rarely be seen because the perforation becomes more obvious after bezoar fragmentation.

**Keywords:** Bezoar, gastric outlet obstruction, compression ulcer

## PP-0296 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

## Treatment of Endoscopic Band Ligation in Cirrhosis-Associated Esophageal Variceal Hemorrhage: Single Center Experience

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**Objective:** Esophageal variceal hemorrhage due to portal hypertension is among the most important complications of cirrhosis. Endoscopic band ligation is one of the most important options in the treatment of these bleedings. In this study, it was aimed to present the results of patients who underwent band ligation due to esophageal variceal hemorrhage in a single center. This retrospective study was conducted in Bakırköy Dr. Sadi Konuk Training and Research Hospital in the department of general surgery. Sixty-four patients who were found to have acute esophageal variceal hemorrhage and performed endoscopic band ligation between January 2010 and 2018 were evaluated.

**Content of Video:** Endoscopic band ligation technique applied in patients with acute esophageal variceal bleeding.

**Conclusion:** Esophageal variceal bleeding can lead to life-threatening consequences in patients with portal hypertension due to cirrhosis. 28.1% of the patients were Child A, 60.9% were Child B and 10.9% were Child C. The Meld score was <9 in 9.4% of the patients, between 10 and 19 in 79.7%, and between 20 and 29 in 10.9%. Endoscopic treatment is an optimal treatment method in the acute treatment of varices causing abundant and persistent hemorrhage. The average band number applied in our study was 2.7 (1-9). Mortality developed in 7.8% of the cases. Endoscopic band ligation therapy patiently performed by experienced hands is a minimally invasive and life-saving method.

**Keywords:** Esophageal varices, variceal hemorrhage, band ligation

## PP-0297 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

## A Rare Case: Percutaneous Endoscopic Gastrostomy Dislocation

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Percutaneous Endoscopic Gastrostomy (PEG) can be briefly described as tube insertion for feeding from the abdominal wall to the stomach in patients who cannot be fed orally for various reasons. It can primarily be considered especially for patients requiring nutrition support for a time longer than 4 weeks. The tube can be inserted mainly using the Pull and Push method. The possibility of complications in the pull technique is higher. Feeding can begin 12 hours after the tube insertion. The procedure may have various complications such as wound site infection, abdominal wall hemorrhage, peristomal leakage, intraperitoneal hemorrhage and aspiration. Although the mortality rate varies in various studies, it is between 1% and 3% on average. The skin to be dry after wound healing is important in terms of avoiding maceration and infection. For this reason, the wound should be cleaned with antiseptic at certain intervals and after bathing the patient.

Various complications can be prevented if the tube is early removed as soon as patient does not need to be fed through a PEG tube. In our case report, the patient was 82 years old and had DM and Alzheimer's disease. The patient had been inserted PEG for nutrition one year ago and fed through it for 8 months. The catheter had not been removed despite the fact that the catheter had not been needed any more. The patient consulted to our center because of the complaints of nausea and vomiting going on for the last 1 month. We planned to remove the catheter. While removing, it was observed that the catheter came out of the stomach and under the skin. Therefore, although it is very helpful for nutrition, when the PEG catheter is not needed, it should be removed early.

**Keywords:** Enteral nutrition, complication, PEG

## PP-0299 [Hernia Surgery]

# Secret Enemy of Advanced Aged Women: Obturator Hernia

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**Introduction:** Obturator hernia is the protrusion of the intraperitoneal or extraperitoneal organs into the obturator duct. Because women's pelvis is wider, the risk of obturator hernia is 6-9 times higher than in men. Most of the obturator hernias become symptomatic when intestinal obstruction develops. Although there are studies indicating increased diagnostic value of the ultrasonography (USG), it is known that computed tomography (CT) is superior to USG and herniography in the establishment of preoperative diagnosis. Its treatment is the surgery. Surgical approaches in obturator hernia include inguinal, retropubic, and transperitoneal methods. On the other hand, laparoscopic approach is not recommended for all obturator hernias because it is difficult for the surgeon to evaluate the viability of the bowel and for resection. In this article, we present three obturator hernia cases operated in our clinic for reminding that this condition should be kept in mind in the differential diagnosis of elderly female patients.

### Case:

**Case 1:** A 75-year-old multiparous patient was brought to the hospital due to the complaint of nausea and vomiting ongoing for 2 days. In the direct abdominal radiography in standing position, air-fluid levels were observed. The CT revealed a finding consistent with obturator hernia on the left side. The patient was taken into an operation. In the operation performed with subumbilical median incision, the 5-cm strangulated jejunum loop in the left obturator canal was removed from the canal. Because the patient had no viability and was gangrenous, resection and anastomosis were performed. The hernia defect was repaired with a prolene mesh. The patient was discharged on the postoperative 8th day.

**Case 2:** A 83-year-old female patient was admitted due to the complaints of abdominal pain, nausea, and vomiting ongoing for 4 days. She had history of multiple labor, decompensated liver cirrhosis, hypothyroidism, and COPD. In the CT, obturator hernia was detected on the right side and she was operated. In the operation performed with subumbilical median incision, the 10-cm strangulated ileum loop was removed from the right obturator canal. Anastomosis was performed after resection and hernia defect was repaired. The patient could not be extubated because of her COPD disorder and she died on the postoperative 8th day.

**Case 3:** A 78-year-old female patient complained of vomiting and abdominal pain intermittently ongoing for 2 days. She had a history of multiple birth, osteoporosis, and COPD. The patient with right obturator hernia in the CT was operated. In the operation performed with subumbilical median incision, it was observed that the inside of the abdomen was full of stool. The 5-cm strangulated ileum loop in the right obturator canal was removed. There was a perforation in the intestinal loop at the 15 cm proximal area of the strangulated ileum loop. Resection and anastomosis were performed for the strangulated loop, the perforated intestinal loop was applied primary repair, and the hernia defect was primarily repaired. The patient with postoperative respiratory insufficiency died on the postoperative 22nd day.

**Conclusion:** In older women, decreased preperitoneal fat tissue around the obturator vessels or atrophy prepares a ground for the development of obturator hernia. Therefore, the obturator hernia in the age group is called "little old lady's hernia." Conditions that increase intraabdominal pressure, such as advanced age, weight loss, constipation and COPD, and the presence of intraabdominal acid are the other risk factors. When obturator hernia causes compression on the obturator nerve, the Howship-Romberg sign appears. Because the mass is concealed under the pectineal muscle in obturator hernia, it is difficult to palpate it. In the presence of non-specific leg pain or intermittent abdominal pain in the elderly and thin women, obturator hernia should be remembered in the differential diagnosis. In addition to anamnesis and physical examination, imaging techniques have a leading role in diagnosing. Whatever surgical approach we choose, the most important thing is intervention on time.

**Keywords:** Obturator hernia, geriatrics, Howship-Romberg

## PP-0300 [Hernia Surgery]

# The Effect of Onlay and Inlay Patch Applications on Recurrence in Incisional Hernia Repair

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**Objective:** The selection of incision type, way of incision closure, and suture material that is used are important factors to prevent the development of hernia. Our goal should be to apply the best method that will lead to the least recurrence with the best tech-

nique. Surgical options include primary repair and open or laparoscopic repair with mesh. Repair with mesh can be performed as onlay, sublay, and inlay according to the area where the repair mesh is to be laid. In this retrospective study, it was aimed to compare the recurrence rates in patients who underwent hernia repair with onlay or inlay technique due to incisional hernia.

**Material and Method:** In this retrospective study, 185 patients operated due to incisional hernia in our clinic between January 2012 and October 2017 were included. The patients were divided into two groups, as those undergoing onlay hernia repair (Group 1) and those undergoing inlay hernia repair (Group 2). In both groups, prolene mesh with the same features was used.

**Results:** Incisional hernia repair was performed in a total of 185 patients, including 121 patients in Group 1 and 64 patients in Group 2. There was a statistically significant difference between the groups in terms of body mass index (BMI), duration of hospital stay, wound site infection, mesh rejection, postoperative ileus and necrosis. This difference was found to be due to higher rates in the patient group undergoing inlay repair.

**Conclusion:** We suggest that onlay technique will be more appropriate than inlay technique if we only use prolene mesh because both recurrence and postoperative morbidity rates are lower.

**Keywords:** Inlay, incisional hernia, recurrence, onlay

## PP-0301 [Hernia Surgery]

# The Effect of Non-Mesh Repair on Recurrence in Femoral Hernias

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**Objective:** The developmental mechanism of the femoral hernias is not clearly known. As a result of increased intraabdominal pressure, preperitoneal fat tissue drags the pelvic peritoneum with itself while passing through the femoral ring. Hernia sac progresses downward in front of the thigh throughout the femoral veins. Femoral hernias are more common in women, which is thought to be caused by looseness in the pelvic floor muscles due to birth.

Of these hernias, approximately 60% are with right localization, 30% with left localization, and 10% with bilateral localization. These patients often complain of swelling, pain and fasciculation in the groin, and usually require emergency surgery due to incarceration or strangulation. Femoral hernia repair can be performed with or without mesh and with open and laparoscopic methods.

In this retrospective study, we aimed to compare the recurrence rates in patients who underwent femoral hernia repair with and without mesh.

**Material and Methods:** This is a retrospective study evaluating 48 patients operated due to femoral hernia in our clinic between January 2012 and October 2017. The patients were divided into 2 groups as those undergoing hernia repair with mesh (Group 1) and those undergoing hernia repair without mesh (Group 2). Patients' files were scanned retrospectively and their demographic data (gender, age), histories, symptoms and findings at admission, state of elective or emergency operation, types of surgeries, complications during follow-up, and recurrences were compared.

**Results:** Of the patients, 35 were female and 13 were male. The number of patients was 32 in Group 1 and 16 in Group 2. When the groups were compared, a statistical difference was found only in the durations of hospitalization. There was no significant difference between the groups in terms of age, sex, hernia localization, necessity of small intestinal resection, and recurrence.

**Conclusion:** Non-mesh repair of femoral hernias does not affect the recurrence rate.

**Keywords:** Femoral hernia, mesh, recurrence

## PP-0302 [Hernia Surgery]

# Comparison of Early and Late Results of Laparoscopic and Open Inguinal Hernia Repairs

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**Introduction:** Inguinal hernia repair is one of the most common surgical procedures in the world. Although many methods of inguinal hernia repair have been described to date, the search on which technique provides better postoperative outcomes still

continues. In this study, we wanted to compare the postoperative early and late results of laparoscopic total extraperitoneal hernia repair (TEP) and open Lichtenstein repair techniques.

**Material and Methods:** A total of 302 patients were included in the randomized prospective study. Patients with recurrence and bilateral hernia were excluded from the study. Of the included patients, 147 were performed TEP and 155 were performed Lichtenstein repair. All surgeries were performed by two surgeons experienced in these operations.

**Results:** The groups showed similar characteristics in terms of age, sex, and hernia types. The mean surgical duration was  $49.2 \pm 15.5$  minutes in the TEP group and  $54.3 \pm 14.6$  minutes in the Lichtenstein group. The duration of operation was significantly shorter in the TEP group ( $p: 0.004$ ). When the mean hospital stay was examined, the duration of hospitalization for the TEP group was significantly shorter ( $p: 0.001$ ). During the mean follow-up period of 40.9 months, the total recurrence rate was found to be 4.3%. There was no significant difference between the two groups in terms of recurrence. In the evaluation of chronic pain, the frequency of pain ongoing for more than 3 months in the TEP group was found to be significantly lower ( $p: 0.001$ ).

**Conclusion:** Although the recurrence rates of TEP and Lichtenstein repair techniques were similar during the mean follow-up period of 40.9 months in our study, the TEP method gave better results than Lichtenstein method with regard to early and late pain. This shows that the TEP method should be accepted as an effective and reliable method as Lichtenstein in the experienced hands.

**Keywords:** Inguinal hernia, laparoscopy, mesh

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## PP-0303 [Hernia Surgery]

# Comparison of Laparoscopic Transabdominal Preperitoneal Inguinal Hernia and Conventional Lichtenstein Hernia Repair in Terms of Postoperative Pain and Patient Comfort

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**Objective:** In this study, it was aimed to investigate the effects of laparoscopic transabdominal preperitoneal (TAPP) hernia repair and conventional Lichtenstein hernia repair on early and late postoperative pain and patient comfort in the light of literature.

**Material and Methods:** This prospective study included 40 patients who were operated for inguinal hernia and performed TAPP and Lichtenstein techniques between January 2013 and January 2014. Of the patients, 20 (50%) were applied TAPP and 20 (50%) were applied the Lichtenstein technique. In the TAPP group, the pain measurements with the Visual Analogue Scale (VAS) at the 1st, 3rd, 6th, 12th, 24th hours, and 1st week, 2nd week and 4th week controls and the times for return to daily life and work after discharge were questioned. In the patients undergoing hernia repair with the Lichtenstein technique, since the operation was performed under spinal anesthesia, pain levels at the postoperative 1st hour were not questioned.

**Results:** Twenty (50%) of the 40 patients included in the study were treated with TAPP and 20 (50%) patients with the Lichtenstein technique. The mean age was 45.7 (24-62) years for the patients undergoing TAPP and 51.25 (21-66) years for the patients undergoing the Lichtenstein method. According to VAS, the pain average of the patients in the TAPP group was 1.9 at the 1st hour, 2.9 at the 3rd hour, 2.5 at the 6th hour, 2.2 at the 12th hour, 1.5 at the 24th hour, 0.6 in the 1st week and 0.2 in the 2nd week. On the other hand, in the Lichtenstein group, these scores were 3.1 at the 3rd hour, 3.9 at the 6th hour, 3.8 at the 12th hour, 3.2 at the 24th hour, 1.5 in the first week and 0.8 in the second week. Of the patients in the TAPP group, 18 (90%) stated that they were able to carry out their daily activities easily at the end of the first week, whereas 13 (65%) of the patients in the Lichtenstein group stated that they were able to do their daily activities. In the postoperative period, no complication occurred in the patients in the TAPP group. In the Lichtenstein group, an approximately 3 cm hematoma was observed in one patient on the first postoperative day and it was drained.

**Conclusion:** Although there were no statistically significant differences in terms of early postoperative complications in patients who underwent TAPP and Lichtenstein techniques due to inguinal hernia, we found that TAPP repair technique was more costly but better in terms of pain especially in the early period, analgesic requirement, duration of hospital stay, and early return to work and daily activities.

**Keywords:** TAPP, inguinal hernia, surgery, pain, patient comfort

## PP-0304 [Hernia Surgery]

## Paratesticular Leiomyosarcoma Accompanying to Strangulated Inguinal Hernia

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Sarcomas arising from spermatic cord are rare malignant tumors that constitute 2.1% of soft tissue sarcomas and that are seen in the genitourinary system at the rate of 1-2%. A 74-year-old male patient was admitted to our emergency unit with the complaints of inguinal pain and swelling going on for the last 3 days. In the physical examination, an approximately 5x5 cm hard non-reducible mass in the right inguinal region and right inguinal hernia were detected. The computed tomography revealed a large hernia sac in the right inguinal region and a 77x55 mm mass inside it. The patient was performed radical orchiectomy and hernia repair. In the pathological evaluation of the mass, the diagnosis of paratesticular leiomyosarcoma was established. Postoperative local recurrence or distant metastasis was not observed in the 7th month. In conclusion, although paratesticular leiomyosarcomas are rarely encountered, they should be kept in mind in the elderly patient group, especially with inguinal mass.

**Keywords:** Paratesticular tumor, leiomyosarcoma, strangulated inguinal hernia

## PP-0305 [Hernia Surgery]

## Our Experience of Inguinal Hernia Repair with Local Anesthesia in Patients with High ASA Score

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**Objective:** The incidence of inguinal hernias and comorbid disease rate increase with age. If elective inguinal hernia repairs are performed under general or regional anesthesia in these patients, monitorization is required in the postoperative intensive care unit due to high ASA scores. Because of the high occupancy rates of the intensive care units and limited capacity in our country, suitable conditions for these patients cannot be provided and their surgeries are delayed. In our study, it was aimed to investigate the reliability of inguinal hernia repair with local anesthesia in patients with high ASA scores.

**Material and Methods:** The data of patients who underwent elective surgery with the diagnosis of inguinal hernia in the Department of General Surgery at Health Sciences University, Bağcılar Health Application and Research Center between May 2017 and January 2018 were evaluated retrospectively. The study included 32 patients having unilateral non-scrotal inguinal hernia without recurrence, having high ASA scores due to comorbid diseases, and requiring monitorization under the conditions of intensive care in the application of general or regional anesthesia. All patients underwent unilateral hernia repair with the Lichtenstein method under ilioinguinal-hypogastric nerve block and local infiltration. Patients' demographic characteristics, comorbidities, ASA scores, duration of hospital stay, and complications were recorded.

**Results:** The mean age of the patients was 67.8±14.1 years and the female/male ratio was 2/30. Twenty-nine patients were ASA III and 3 patients were ASA IV. The mean duration of hospital stay was 16.3±6.8 hours. The comorbidities were hypertension in 26 patients, coronary artery disease and congestive heart failure in 16 patients, COPD in 12 patients, DM in 9 patients, CRF in 4 patients (requiring hemodialysis), cardiac pacemaker due to rhythm disorder in 4 patients, and previous CVE in 2 patients. As a complication, subcutaneous hematoma was detected in 2 patients after operation. At the time of transition to general anesthesia and hospitalization, no second surgery was needed in any patient. Despite the insufficient time of follow-up, no recurrence was observed.

**Conclusion:** The inguinal hernia repair under local anesthesia in all age groups with high ASA score can be safely performed with low complication rates and without the need for intensive care follow-up.

**Keywords:** Inguinal hernia, comorbidity, local anesthesia, comorbid disease

## PP-0306 [Hernia Surgery]

## Intraperitoneal Ventralex Patch Applications in Ventral Hernia Repairs

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Ventral hernias are among the common conditions in surgical practice and umbilical hernias are the most frequently encountered ones of them. The development of recurrence at the rates varying from 10% to 54% after the repair of ventral hernias with primary suture techniques (herniorrhaphy) have made patch repairs (hernioplasty) popular. In our clinic, a total of 71 patients were operated by using the Ventralex patch, one side of which was ePTFE and the other side was polypropylene and which could be administered intraperitoneally, between January 2015 and June 2017. Hernias larger than 3 cm were not included in the study. Small ventral hernias were repaired with open surgical method by intraperitoneal tension-free method. Of the patients, 40 were male and 31 were female, and the mean age was 47.5 (range 28-74) years. According to the ventral hernia typing, there were 46 cases with umbilical hernia (65%), 18 cases with paraumbilical hernia (26%), and 7 cases with trocar site hernia. All cases were operated under general anesthesia. Duration of operation, analgesic requirement, duration of hospitalization, postoperative complications, and recurrences were recorded. The mean duration of surgery was detected to be 35 min (range 22-60). All patients were applied analgesia on the first day after surgery and discharged one day after the operation. They were asked to come for the first control examination after 1 week and for the second control examination after 4 weeks. Minimal wound site infection was observed in two cases (2.8%). No recurrence developed in any case. In our study, we concluded that the Ventralex patch used in small ventral hernia cases that were operated with open technique is a prosthetic material that can safely be used owing to its advantages including low complication rate, ease of application and shorter hospitalization.

**Keywords:** Ventral hernia, ventralex patch, umbilical hernia

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## PP-0307 [Hernia Surgery]

### Case Report: Amyand Hernia

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**Introduction:** Amyand hernia, which was first introduced to literature by Cladius Amyand in 1735, is defined as the presence of an inflamed or non-inflamed appendix vermiformis in the inguinal hernia sac. Amyand hernias constitute about 1% of all inguinal hernias. They are more common on the right side due to the anatomical location of the appendix on the right side. The diagnosis is usually established during the operation. Its treatment is primarily based on surgical approach and the treatment may vary depending on appendix inflammation, surgical site contamination, age, and the size of the hernia defect.

**Case:** A 38-year-old male patient having a swelling in his right groin for 3 months was admitted to our clinic due to a pain in his right groin for 48 hours. In the physical examination of the patient, who was learned to have used methamphetamine in his anamnesis, an irreducible painful swelling in the right inguinal region and tenderness in the right lower quadrant were detected. He had no nausea and vomiting and he was able to defecate. In the laboratory analysis, leukocytosis (16,000 mm<sup>3</sup>) and elevated CRP (16mg/L) were found. The patient was operated under spinal anesthesia with the diagnosis of incarcerated inguinal hernia on the same day. When the hernia sac was opened, it was seen that there was an erected, inflamed appendix with necrotic distal area in the sac. Lichtenstein inguinal hernia repair was performed with appendectomy, high ligation and mesh. Pathologic examination result was consistent with gangrenous appendicitis. The patient was discharged on the first postoperative day with recovery.

**Conclusion:** When all inguinal hernias are evaluated, appendix in the hernia sac is encountered at the rate of 1%. The incidence of Amyand hernia in the cases of acute appendicitis has been reported as 0.1%. Amyand hernia is more common in males and in the right side inguinal hernias. The diagnosis of Amyand hernias can rarely be established preoperatively. Imaging methods such as ultrasonography, computed tomography, and magnetic resonance imaging can be helpful for preoperative diagnosis, but radiological imaging is not routinely recommended because it will not change the treatment approach. In our case, the final decision of surgery was taken after the physical examination and clinical evaluation and no radiological imaging was needed. The surgical procedure varies according to the condition of the appendix in Amyand hernia. If the appendix is inflamed or perforated, it is best to perform inguinal hernia repair with appendectomy. There are studies suggesting appendectomy in children and adolescents with normal appendix because there is a high risk of developing appendicitis in the future. On the other hand, appendectomy is not recommended in elderly patients with normal appendix because of the prolongation of the surgical period, the presence of comorbid systemic diseases, and the low risk of appendicitis in the future. Another debate in the surgical approach is the use of prosthetic mesh in the hernia repair. If there is contamination in the surgical site due to appendicitis, primary repair methods should be considered instead of using mesh. However, there are no case series at this level in the literature to form a consensus. In our case, we performed hernia repair with appendectomy, high ligation, and prosthetic material. At the end of our 8-week follow-up, no complications occurred.



Amyand hernia is a rare type of hernia and its diagnosis is usually established intraoperatively. The surgeon must have knowledge on this hernia type and its treatment modalities.

**Keywords:** Amyand hernia, inguinal hernia, acute appendicitis

## PP-0308 [Hernia Surgery]

# Soft Tissue Tumor Mimicking Inguinal Hernia

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**Introduction:** Inguinal hernia is a disease that is commonly encountered in the society and it often manifests itself as a complaint of pain and swelling in the inguinal region. Many diseases that cause swelling and pain in the inguinal region can mimic inguinal hernia. In our study, we aimed to present a patient who was operated due to the diagnosis of irreducible inguinal hernia but diagnosed with soft tissue tumor.

**Case:** A 47-year-old male patient was admitted to the outpatient clinic with the complaints of swelling and pain in the left groin. He stated that the size of the swelling increased for the last 8 months and that this swelling was not protruding inward. In the physical examination of the patient, a clear decision in terms of hernia in the left inguinal region could not be taken. The result of ultrasonography was interpreted as indirect inguinal hernia that could not be reduced in the left inguinal region. Mesh inguinal hernioplasty was recommended to the patient. It was observed in the operation that there was a lipomatous fat tissue in the size of 11x7x4 cm, originating from the subcutaneous tissue, and this lipomatous fat tissue advanced to the inguinal canal and was adhered to the inguinal canal at the outer ring level. The lipomatous lesion was excised. No direct or indirect inguinal hernia was detected in the examination. The patient was discharged on the postoperative 1st day.

**Conclusion:** Swelling and pain from inguinal hernia symptoms may require imaging techniques in addition to physical examination, as they may be present in mass pathologies that are in the same anatomic location. In our case, the gradually increasing complaint of swelling was in favor of both inguinal hernia and lipomatous lesion. Ultrasound may help to establish the diagnosis of direct or indirect inguinal hernia by increasing the intraabdominal pressure with Valsalva maneuver. We can say that the subcutaneous lipomatous lesion adhered to the inguinal canal mimicked the indirect hernia in the ultrasound despite this maneuver in our case. Soft tissue tumors that can mimic hernia should always be kept in mind, even if imaging techniques support hernia in patients to be operated with the pre-diagnosis of inguinal hernia.

**Keywords:** Soft tissue tumor, inguinal hernia, physical examination, ultrasonography

## PP-0309 [Hernia Surgery]

# A Rare Organ in Inguinal Hernia Sac, Bladder; Laparoscopic Repair

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**Introduction:** The herniation incidence of the bladder is estimated to be 4% in the inguinal hernias. Its incidence in men older than 50 years is around 10% and most cases are asymptomatic. It is incidentally detected during imaging techniques or surgery. It is diagnosed with intravenous pyelography, cystography, ultrasonography or computed tomography. In its treatment, the bladder is relocated to its anatomical location and a classical hernia repair with or without mesh is performed. In this study, it was aimed to present an inguinal hernia case with bladder in the hernia sac, which is a rarely encountered condition.

**Case:** A 68-year-old male patient was admitted to the emergency department because of sudden growth of the swelling in the left inguinal region, which was present for 2 years. He was operated due to benign prostatic hyperplasia 3 years ago and he had the complaints of frequent urination, urinary incontinence, and dysuria for 2 years. In the physical examination, irreducible inguinal hernia was present on the left side. Ultrasonography was performed on the patient without air fluid level in the direct abdominal x-ray in standing position, which revealed left inguinal hernia. The organ that could not be exactly differentiated in the hernia sac was thought to be intestinal loop. The patient was operated with the diagnosis of irreducible inguinal hernia. With laparoscopic approach, the bladder was relocated in its anatomic localization and mesh repair of inguinal hernia was performed. In the postoperative cystogram, there was no contrast media leakage in the abdomen. The patient was discharged with healing. In the control examination, it was observed that the urinary symptoms of the patient was improved.

**Conclusion:** The bladder may be found in the indirect or direct hernia sacs as intraperitoneal, paraperitoneal or extraperitoneal anatomically. Paraperitoneal herniation is the most common type, and the bladder extends in the medial part of the hernia sac. Bladder herniation is usually asymptomatic. It may manifest itself with nonspecific urinary symptoms and may be detected incidentally during surgery or imaging. Its detection during preoperative period prevents possible bladder injury during operation. Because of this, routine imaging is recommended in patients at the age over 50 years, having indirect or femoral hernia, and having benign prostatic hyperplasia-like symptoms. Gomella et al. detected bladder injury at the rate of 38% during herniography in cases of bladder herniation not detected preoperatively. Irreducible inguinal hernia requires emergency surgical intervention due to the possibility of strangulation and explorative laparotomy is the gold standard. The use of laparoscopic hernia repair has recently increased as an alternative to laparotomy with long hospitalization, prolonged return to daily life, and increased morbidity rate. In our case of irreducible left inguinal hernia, laparoscopic mesh repair was performed. In inguinal hernia repair, particularly in irreducible cases, recent laparoscopic interventions are preferred because they have lower morbidity compared to laparotomy. In patients older than 50 years, having prostatism symptoms and indirect lower abdominal wall hernia, the application of preoperative imaging techniques considering the possibility of the bladder in the hernia sac will reduce the likelihood of bladder injury during operation.

**Keywords:** Hernia, laparoscopy, bladder

## PP-0310 [Hernia Surgery]

# A Rare but Mortal Complication After Herniorrhaphy: Necrotizing Fasciitis

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**Introduction:** Hernia is a condition in which an abdominal organ reveals itself outside the abdominal wall by passing through a cognitive or acquired cleft in the abdominal wall as wrapped by a peritoneal sac. It is observed in 5% of the whole population. It occurs in men three times higher than women. Inguinal hernias constitute 80-85% of all hernias. The complications that can be seen after herniorrhaphy are divided into two groups as intraoperative and postoperative complications. Intraoperative complications mostly include intraabdominal organ injuries associated with hernia sac ligation, hemorrhage, nerve incision, and vas deferens incision. Postoperative complications include seroma, wound site infection, hydrocele, neuroma, testicular atrophy, necrosis, and necrotizing fasciitis due to scrotal or mesh reaction as well as general complications. In this study, it was aimed to present a patient developing necrotizing fasciitis after herniorrhaphy and being discharged with recovery after VAC treatment with literature.

**Case:** A 77-year-old male patient was admitted to our clinic with the diagnosis of left inguinal hernia and hospitalized for surgery. The patient's physical examination revealed a left scrotal hernia. It was learned from his anamnesis that he received oral anticoagulant therapy due to coronary comorbidity. This therapy was stopped and low molecular weight heparin therapy was initiated. Left inguinal mesh herniorrhaphy was applied to the patient. In the postoperative follow-ups, active hemorrhagic fluid was found in the patient's drains. A lot of hematomas were detected in the scrotum in the scrotal USG. In the follow-up of the patient with normal testicular vascular blood supply, necrotizing fasciitis was considered due to the presence of scrotal necrosis and edema with emphysematous crepitation on the skin and he was taken into operation. The patient underwent necrosectomy, orchiectomy, debridement and mesh removal operations. The patient was treated with 5 cycles of VAC within periods of 3 days and the skin was primarily approached upon the formation of clean scrotal granulation tissue. The patient was discharged with healing.

**Conclusion:** The rate of postoperative complications is 1-3.5% in elective inguinal hernia repairs. They are usually observed as a result of blunt dissection of vas deferens and testicular vessels during surgery. Scrotal edema and hematoma are the most common complications of hernia repair. Scrotal necrotizing fasciitis is a rarer but mortal complication. Fournier's gangrene (FG) is a rare bacterial infection that can be progressive and lethal, which manifests itself with the necrosis of the subcutaneous tissue and fascia in the perineal, genital or perianal regions. Fournier gangrene typically begins in the labium region in women and scrotum region in men, and rapidly spreads to the perineal, gluteal and abdominal regions. Necrosis rapidly spreading in the tissues often results in systemic sepsis, toxic shock syndrome, and multiple organ failure. The most commonly reported bacteria are Gram-positive aerobes such as enterococci and streptococci; Gram-negative aerobes such as *E. coli* and *P. aeruginosa*; and anaerobes such as *Clostridium* and *Bacteroides*. Early diagnosis and wide surgical debridement are very important in the treatment. The VAC, that is negative pressure, increases the local blood flow in the wound areas, provides a significant shrinkage, acceleration in the development of granulation tissue, and control of edema and wound secretion.

**Keywords:** Inguinal hernia, necrotizing fasciitis, vac

## PP-0311 [Hernia Surgery]

## Management of Complications Associated With Abdominal Wall Defect Repair After Open Obesity Surgery: A Difficult Case

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Today, laparoscopic incisional hernia repair is preferred by many physicians due to less recurrence rate, less wound site infections and less tissue dissection. One of the most common complications of intraperitoneal patches used in laparoscopic incisional hernia repair is postoperative adhesions. In this study, we present a 62-year-old female patient requiring multiple hernia repair due to multiple abdominal wall defects after open obesity surgery. In the examination and abdominal tomography of the patient, who was performed open sleeve gastrectomy due to obesity 5 years ago and who had swelling on the abdominal wall 6 months after the operation, a 5 \* 5 cm fascial defect was detected in the right lateral area of the laparotomy incision. The laparoscopic incisional hernia repair was performed to the patient with an intraperitoneal patch. The abdominal tomography, which was taken one year after the operation because of her continuing abdominal pain, revealed recurrence. The patient was applied onlay mesh repair with open surgery then. The patient, who had the complaint of leakage from the last surgical incision, was hospitalized and given antibiotherapy. However, since the leakage continued despite antibiotherapy, the patient was operated for the excision of the onlay mesh. It was seen during operation that the onlay mesh was infected and there was an intestinal fistula. The mesh was excised. End-to-end anastomosis was performed by resecting the intestinal loop adhered to the mesh. Because it was observed in the exploration that the intraperitoneal patch was adhered to the small intestine loops, adhesiolysis was applied. The fascial defect was primarily repaired. Vacuum-assisted drainage was applied to the patient with postoperative wound dehiscence. On the postoperative 35th day, the patient was discharged with surgical healing.

The rate of incisional hernia after open surgery, especially in obese patients, is quite high. Severe complications of the patch after incisional hernia repair can develop. As much as possible, open surgery should be avoided in obese patients.

**Keywords:** Obesity, hernia repair, intestinal fistula

## PP-0312 [Hernia Surgery]

## A New Method for Laparoscopic Repair of Inguinal Hernias: Mesh Preparation and Different Fixation Area

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**Objective:** Laparoscopic inguinal hernia repairs have become more popular than open repairs due to their advantages since 1992, when they were defined by Dulucq. The transabdominal preperitoneal (TAPP) and total extraperitoneal (TEP) approaches have mainly been described for the repair. In these techniques, mesh fixation is usually done in the preperitoneal area with tact. This increases the cost and can cause certain complications, especially chronic pain. Based on our previous work, 'A new method in the repair of femoroinguinal hernias by videolaparoscopic way (sakman method)', we proposed a method eliminating classical mesh fixation areas and related complications but does not increase the recurrence rate and we analyzed the results in the light of the literature.

**Material and Methods:** Male patients with the ASA score of 1 -2 and the diagnosis of inguinal and femoral hernia, who were between the ages of 18 and 80 years, were included in the study. Those who were not suitable for general anesthesia, those with medication or alcohol addiction and coagulopathy, those who had a history of previous surgery were excluded from the study. The included patients were followed up peroperatively and until postoperative 24th month. The data were analyzed with the literature.

**Surgical technique:** The patients were operated with the 3-port classical TEP approach. We used the mesh prepared different from classical application and subcutaneous fixation area that we proposed.

**Mesh preparation and application:** The 15x15 cm polypropylene mesh was cut in the shape of T at a distance of 2.5 cm from the edge. The short legs were rolled and shaped as a plug, like a cigarette. One third of the plug of the mesh was folded on itself and fixed with a vicryl suture. Thus, a 10x15 cm mesh folded on its own with a 1/3 lateral plug was obtained. The end of the plug was fixed by gently approximating with vicryl suture and this suture was left long to be pulled under the skin. This mesh was left to the preperitoneal area from the camera port by adjusting the medial-lateral coordination of the plug according to the location of

the defect. The vicryl suture on the top of the long plug was carefully extended towards the subcutaneous area from the hernia defect in the preperitoneal region with the help of a conventional laparoscopic instrument and removed from the skin with an about 1-2 mm incision on the skin. Thus, the spread of the mesh into the preperitoneal area by including the mycopectineal orifice was ensured provided that the plug was in the defect. The vicryl suture removed outside was fixed in the subcutaneous area.

**Results:** In patients applied the repair procedure with the 'plug mesh and subcutaneous vicryl fixation' technique that we developed, we obtained shorter duration of hospitalization, less postoperative analgesic requirement, decreased urinary retention, and seroma rates compared to other laparoscopic techniques described in the literature. There was also no significant difference in the time of return to normal activities and recurrence of hernia in 24-month follow-ups.

**Conclusion:** The 'plug mesh and subcutaneous vicryl fixation' technique that we developed in laparoscopic TEP inguinal hernia repair decreases the need for narcotic analgesia, duration of hospital stay, and development of urinary retention and seroma and additionally, causes no increase in the recurrence rate. Moreover, it is advantageous in terms of cost and it is a technique that can be preferred in suitable cases.

**Keywords:** Pain, hernia, fixation, laparoscopic, plug, TEP

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## PP-0313 [Hernia Surgery]

# Case of Suprafascial Giant Hematoma Cyst Developing After Umbilical Hernia Repair

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A 42-year-old female patient was admitted to our department because of swelling on the abdominal wall. The patient had been operated for umbilical hernia in an external center 5 years ago. Due to the development of recurrence, she was re-operated in the external center on May 2017 and then, she was re-admitted with a 17x10 cm cystic mass under the surgical site on June 2017. The cyst was followed up and the 15x12 cm cyst showed continuity in the control USG performed on August 2017. On September 2017, the cyst was excised. The pathological result was reported as a fibrin-containing pseudocyst. On January 2018, the patient consulted to our department and her general condition was good and vital findings were normal in the physical examination. There was a 20x20 cm mobile mass extending from the epigastric region to the subumbilical area in the abdomen wall, and not causing tenderness. The values of the complete blood count and biochemical parameters were normal. In the operated patient, the mass considered to be hematoma with a cystic septa having a total weight of 3360 g was totally removed. Absorbent drain was placed on the fascia under the skin. The patient was discharged with absorbent drains after observing the absence of postoperative decrease in hemogram. Postoperative hemorrhage in the abdominal wall hernias is a rarely encountered condition. Insufficient hemostasis control can cause this condition. In this case, it was seen that the small leakages that could not be noticed after the operation turned into a giant mass by forming a cyst wall over time. It is important that the absorbent drains should not be removed from the surgical site until the disappearance of fluid in the drains and abdominal corsets should be used for the purpose of compression.

**Keywords:** Anterior abdominal wall hematoma, pseudocyst, abdominal hernia

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## PP-0314 [Hernia Surgery]

# A Rare Hernia that is Commonly Diagnosed Intraoperatively: Amyand Hernia

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**Introduction:** Although the inguinal hernia is a very common disease, Amyand Hernias, which are characterized by the presence of an appendix in the inguinal hernia sac, constitute approximately 1% of cases. Appendix in the inguinal hernia was first reported by Claudius Amyand in 1735. The preoperative diagnosis of the disease is very difficult. This rare clinical condition may cause changes in the preoperative surgical treatment options. In our case report, we wanted to draw attention to a rare type of hernia.

**Case:** A 67-year-old male patient was admitted to the outpatient clinic of general surgery with the complaints of swelling and sometimes cramp-like pain in the right groin, which were continuing for 3 years. In the physical examination, indirect inguinal hernia was detected in the right inguinal region. There was no finding in his abdominal examination. The patient was prepared for surgery after diagnosing the indication for surgery. The patient was administered general anesthesia and performed a skin incision over the right inguinal canal. The layers were passed and the spermatic cord was suspended over the pubic tubercle. The

hernia sac was severely adhered to the surrounding tissues. Cremaster muscle fibers were dissected and hernia sac was isolated. A hard long mass was palpated in the sac besides the intestinal loops. Upon that, the hernia sac was opened and appendix vermiformis was seen in normal appearance. The appendix was reduced into the abdomen. Then, hernioplasty was performed and the operation was terminated. The patient was discharged on the 1st postoperative day without any problems.

**Conclusion:** The inguinal hernia is defined as the protrusion of a portion of abdominal organ or organs through the weak points of the abdominal wall together with the peritoneum. Although the pathophysiology of Amyand's hernia is not clear yet, it is defined as a chronic process. Because patients generally present with strangulated hernia when the appendix is inflamed or perforated in the hernia sac, it is difficult to establish preoperative diagnosis. Treatment approaches in Amyand hernia are still controversial today. If the appendix is inflamed, appendectomy is applied. The application of appendectomy in the detection of normal appendix vermiformis in the sac is controversial because of the infection risk in routine hernia repairs. Another controversial issue is the use of prosthetic material for hernia repair. It has been reported that the placement of prosthetic material into the surgical site in adult patients with Amyand's hernia will increase the risk of infection or the placement of patch is contraindicated in cases with perforated appendix. Amyand's hernia, which is rarely encountered, should be kept in mind and general surgeons should have knowledge about the treatment and follow-up of this disease.

**Keywords:** Inguinal hernia, amyand hernia, appendix vermiformis

## PP-0315 [Hernia Surgery]

# Is Recurrent Incisional Hernia an Obstacle for Laparoscopic Repair?

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The incidence of incisional hernia, which is defined as abdominal wall hernias developing from the incision line of previous abdominal surgery for any reason, has been reported in an average rate of 10-15% and this rate increases up to 23% in the presence of postoperative wound infection. Obesity, smoking, advanced age, inappropriate use of surgical material or technique, and all factors that can lead to immunosuppression, and particularly infection, increase the risk of incisional hernia. While open technique is preferred by most of the centers in the incisional hernia repair at present, the use of laparoscopic incisional hernia repair is gradually increasing because of increased laparoscopic surgical experience, technological improvements in the laparoscopy systems, and easy access to patches suitable for intraabdominal usage and fixation devices. However, laparoscopic applications in recurrent hernia repair still remain in the background in surgical clinics.

In this report, we present a 55-year-old female patient who had undergone appendectomy with Mc Burney incision about 30 years ago and then 3 hernia repairs due to recurrent hernias on the same incision line and whose 4th hernia repair was performed laparoscopically.

In the abdominal computed tomography performed for the suspect of recurrence hernia in the incision line in the right lower quadrant, the hernia was observed to include a single sac. The intraperitoneal adhesions were dissolved with the help of one 10 mm and two 5 mm ports and an energy device. The omental tissue in the hernia was taken into the abdomen. After doing necessary measurements, serosal surfaces and two-sided patch were laid in the hernia area and the patch was circumferentially fixed to the anterior abdominal wall with fixation sutures of the 4 quadrants and then absorbable fixation device. No drain was used.

During the preparation of the patient and the surgical procedure, the guideline of the SAGES (Society of American Gastrointestinal and Endoscopic Surgeons) for laparoscopic ventral hernia repair published on June 2016 was considered. The patient was started oral intake at the 6th postoperative hour and she was discharged on the 2nd postoperative day. In centers with surgeons educated and experienced on minimally invasive surgical field, we think that recurrent incisional hernias can be safely treated with laparoscopic methods as in this case and chronic pain and cosmetic problems associated with open surgery will decrease and quality of life will increase.

**Keywords:** Incisional hernia, recurrent incisional hernia, laparoscopic hernia repair

## PP-0316 [Hernia Surgery]

# Umbilical Trocar Site Hernias Developing After Laparoscopic Cholecystectomy

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**Objective:** The primary treatment of symptomatic cholelithiasis is laparoscopic cholecystectomy. It has lower rate of postoperative complications than open cholecystectomy and it is a more comfortable operation for the patient. The trocar site hernias are uncommon disorders after laparoscopic cholecystectomy, but they may lead to conditions that may result in even bowel resection. In this study, it was aimed to retrospectively evaluate the hernias of the umbilical trocar entry site after laparoscopic cholecystectomy.

**Material and Methods:** The data of 18 patients who were operated due to the development of hernia in the umbilical port site after laparoscopic cholecystectomy between 2013 and 2017 were retrospectively evaluated.

**Results:** It was learned from the anamneses of the patients that they underwent laparoscopic cholecystectomy operations in different centers. All 18 patients complained of pain in the umbilical region. Two patients were firstly examined in the emergency service and operated due to incarcerated hernia. Sixteen patients were electively operated. Of the patients, 61.1% (n=11) were female and 38.1% (n=7) were male. Their mean age was 46.06 (33-60) years. The mean body mass index (BMI) was detected to be 34.4 (27-42). The patients noticed the hernia sac at trocar entry site at a mean time of 22.72 (11-38) months. The mean time from the recognition of hernia until the surgery was 34.06 (12-51) months and the mean fascial defect size was 30.94 (18-50) millimeters. Despite the higher number of female patients, no statistical correlation was found between sex and herniation. Three patients (16.6%) had leakage from the umbilicus trocar site at the postoperative first week, but they were not given any antibiotherapy.

**Conclusion:** Hernia development after laparoscopic cholecystectomy is often noticed in the postoperative 2nd year and patients wait for the surgery decision approximately for 3 years. Growth of hernia sac and increase in pain are thought to affect this situation. It is thought that the umbilical trocar entry site is risky for the development of hernia particularly in patients with high BMI and careful repair of the fascial defect in the umbilical region will reduce the risk of hernia.

**Keywords:** Hernia, cholecystectomy, trocar

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## PP-0317 [Hernia Surgery]

# The Relationship of Our Results with Experience in Patients Undergoing TEP

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**Objective:** We aimed to evaluate inguinal hernia patients undergoing TEP in our clinic between February 2012 and December 2017 in terms of complications and recurrence and to demonstrate the importance of experience.

**Material and Methods:** Standard technique was applied by a single surgeon. Exploration was performed by inserting one 10 mm infraumbilical port and two 5 mm ports without using balloon. Prolene mesh in the size of 10\*13 cm was fixed with tacker. The patients were evaluated in terms of their ages, sexes, duration of surgery, hernia type, duration of hospitalization, peroperative and postoperative complications, conversion to open surgery, and recurrence parameters.

**Results:** Between February 2012 and December 2017, a total of 148 laparoscopic TEPs were performed to 111 patients. The age range was 20-81 years, 10 of the patients were female and 91 were male. There were 37 bilateral hernias and 74 unilateral hernias, and 94 of them were indirect and 64 were direct. The duration of the operation varied from 35 minutes to 124 minutes, and the patients were discharged on the first postoperative day on average. The peroperative complications were bleeding from the port in one patient, opening of the peritoneum in 20 patients, and conversion to open surgery in 8 patients. The postoperative complications were pain in 5 patients, which continued mostly for 3 months, seroma in 4 patients, and recurrence in 4 patients.

**Conclusion:** One of the most important challenges of the TEP technique is to work in a small area and not to be accustomed to anatomy. Working on the accurate plane and paying attention to specific anatomical points are important parameters. There are publications reporting the learning curve in 80 cases or 20-50 cases. We saw that the duration of the surgery decreased as experience increased. While the rate of peritoneal opening was reported as 11% on average in the publications, it was found to be 18% in our cases. Inferior epigastric vessel injuries were reported as 0-3% and organ injuries as 0,1% in literature, but they were not seen in our patients. While the development rate of seroma was reported between 1.9 and 11%, it was 3.6% in our study. Seroma formation was found to be associated with major defect. Pain was reported as 12.4% in open surgery and 4.5% in laparoscopic surgery and we observed as 4.5%. While conversion to open surgery was accepted at the rate of 1-10%, it was found as 7.2% in our cases. The reasons for conversion to open surgery are inability to fully reveal the anatomy (drastically reducing working area with the opening of the peritoneum, entering the wrong plan, etc.) and irreducible hernia sac. Recurrence is an important problem seen after inguinal hernia repairs. Recurrence, which was reported to be at the rate of 1-4% on average, it developed in 3.6% of our cases in the first year. This demonstrates the importance of experience, in other words learning curve.

In conclusion, we tried to reveal the relationship between experience and outcomes in total extraperitoneal hernia repair by demonstrating that parameters such as complication, conversion to open surgery and recurrence were more frequently observed within the first year.

**Keywords:** Laparoscopic inguinal hernia repair, TEP, experience

## PP-0318 [Hernia Surgery]

# Our One-Year T.A.P.P. Experience in Inguinal Hernia Repair

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**Objective:** We see that the use of laparoscopic procedures in inguinal hernia repair is gradually increasing and becoming widespread along with developing technology. Compared to open surgery, laparoscopic inguinal hernia repair has advantages such as lower risk of postoperative pain and infection, earlier return to the daily activities, and better cosmetic results. There are two commonly used methods in laparoscopic inguinal hernia repair. One of them is total extraperitoneal preperitoneal (TEP) hernia repair and the other is trans-abdominal preperitoneal (TAPP) hernia repair. In this report, it was aimed to present patients admitted to İzmir Tepecik Training and Research Hospital between 2017 and 2018 for inguinal hernia and performed TAPP with their demographic characteristics.

**Material and Methods:** The patients undergoing TAPP due to elective inguinal hernia in the department of general surgery between 2017 and 2018 were retrospectively analyzed in terms of age, gender, duration of operation, hospitalization and post-operative complications.

**Results:** Of the 46 patients included in the study, 3 were female (6.53%), 43 were male (93.47%), and the mean age was 46.2 years (age range: 20 -77 years). In the preoperative physical examinations of the patients, it was found that 26 patients had right inguinal hernia (56.5%), 10 patients had left inguinal hernia (21.7%), and 10 patients had bilateral (21.7%) inguinal hernia and they were operated. The mean duration of operation was 107 minutes and this time was 92 minutes in unilateral hernia repair. Only in one patient, the surgical technique was switched to open technique due to technical insufficiency, and the operations of remaining 45 patients were completed laparoscopically. The patients were mobilized at the postoperative 6th hour as a standard approach, their foley catheters were removed, and they were started oral intake. The mean duration of hospitalization was detected as 1.2 days. No complication or recurrence was observed in the follow-up of postoperative patients.

**Conclusion:** The most important advantages of laparoscopic hernia operations include less need for postoperative analgesia, earlier return to daily activities, ability to perform repair in bilateral hernias at the same session, and good cosmesis. The prolonged surgical period and high cost with general anesthesia still remain to be disadvantages.

**Keywords:** Inguinal, hernia, laparoscopic, trans-abdominal pre-peritoneal technique

## PP-0319 [Hernia Surgery]

# Perforated Appendicitis Mimicking Incarcerated Inguinal Hernia

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Acute appendicitis and hernia operations are the most common operations in general surgery. The coexistence of these two clinical entities is a rare condition. The presence of the appendix vermiformis in the hernia sac (inguinal and femoral) is an example of this rare case and the presence of an acute appendicitis in the sac is much less common. The coexistence of both clinical entities requiring emergency intervention (incarcerated hernia and acute appendicitis) is a much rarer condition and it creates a more complex situation both in diagnosis and in treatment. Concentrating on one clinical entity in the diagnosis and treatment and overlooking the other one may lead to life-threatening complications. Especially as in our case, this condition is very important in some elderly patients with acute appendicitis symptoms and subclinical findings. In this study, we aimed to draw attention to this important situation by presenting a 60-year-old male patient who presented with incarcerated inguinal hernia complaints and had concurrent perforated appendicitis independently of hernia sac in his physical examination and analysis. The patient having right inguinal hernia, which had reduced from time to time for approximately 7-8 years, woke up with severe pain and swelling in his right groin and scrotum and consulted to the emergency service. The patient sometimes had nausea but no vomiting during this time. The gas-stool defecation did not occur during the period from the onset of pain to the examination in the emergency unit. In the physical examination of the patient, there was a hard swelling with sensitivity

and increased temperature in the right groin and scrotum, which was consistent with incarcerated hernia. The hernia, which was irreducible in the normal position in the physical examination, was reduced by giving the patient Trendelenburg position. The patient's WBC was 16,300 and there was no level in the direct abdominal x-ray in standing position. In the examination repeated after sac reduction, the patient was observed to have diffuse tenderness in bilateral abdominal quadrants particularly on the right side and the patient was performed abdominal tomography with opaque agent. In addition to the hernia sac described in the right groin and found to contain a long segment intestinal loop in the tomography, there was edematous appendix wall, wall thickening in the neighboring intestinal loops, and hyperdense lines in the fatty tissues in the pericecal region. Besides that, the patient was firstly performed anatomic hernia repair with right inguinal incision. Then, laparotomy was performed and the inside of the abdomen was explored. In the exploration, it was seen that the end of the appendix was perforated and there was abundant amount of purulent fluid in the abdomen. Then, the purulent fluid in the abdomen was aspirated and the patient was performed appendectomy. The oral intake of the patient was started after gas discharge on the postoperative 2nd day. On the postoperative 8th day, he was initiated oral antibiotherapy and discharged with recovery.

**Keywords:** Inguinal hernia, incarceration, perforated appendicitis

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## PP-0320 [Hernia Surgery]

# The Importance of Radiological Findings in Internal Hernia Management

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**Objective:** Internal hernia is a rare but highly mortal type of hernia, which can cause intestinal obstruction. The gold standard diagnostic method is computed tomography (CT) and it is important to know the preoperative diagnosis in the patients who will be operated due to mechanical bowel obstruction.

**Material and Methods:** Six patients who were admitted to the emergency unit of our hospital for abdominal pain and radiologically diagnosed with internal hernia between January and December 2017 were evaluated retrospectively.

**Results:** Four of the 6 patients were female and 2 were male. The mean age was 60.3 (36-85) years. The complaint of all patients at admission was abdominal pain. One patient had a history of intraabdominal surgery, 3 had a history of trauma (1 patient in-vehicle traffic accident, 2 patients falling from height). Two patients had no history of abdominal surgery or trauma. The CT of the cases revealed intestinal loops clustering by passing through a mesenteric defect and they were radiologically evaluated as transmesenteric hernia. Two patients having the sign of mechanical bowel obstruction in CT and a dilated appearance, but not having intestinal loops with air-fluid levels or increased wall thickness in the intestinal loops were treated conservatively. All of the other 4 operated patients had increased wall of the small intestinal loops and dilated intestinal loops containing air-fluid levels, which were consistent with mechanical bowel obstruction. In all operated patients, herniation was observed from a mesenteric opening. Of the operated patients, while 2 were treated with only reduction, other 2 patients were performed partial small intestine resection and one of them additionally underwent sigmoid colon resection.

**Conclusion:** In patients not having mechanical bowel obstruction and increased thickness of bowel wall despite the radiological presence of internal hernia in CT, conservative treatment may be an appropriate approach. In the literature, the treatment of internal hernias is reported as emergency surgery. However, internal hernia is a condition with high mortality despite emergency surgery. If there is no radiological evidence of mechanical bowel obstruction and there is no edema on the intestinal wall, conservative treatment should be considered in selected cases. The results are pretty good.

**Keywords:** Hernia, internal, transmesenteric, trauma, mechanical bowel obstruction

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## PP-0321 [Hernia Surgery]

# Does the Videoscopic Dissection Affect the Time and Complication of Inguinal Hernia Repair with the Total Extra Peritoneal (TEP) Approach?

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**Objective:** Laparoscopic inguinal hernia repair has recently developed as a prominent method, and nowadays, it has reached the stage of the insertion of mesh into the extraperitoneal area. In this study, it was aimed to retrospectively evaluate the patients who underwent extraperitoneal posterior repair by using a videoscopic dissection without entering the abdomen and to present the advantages of the technique.

**Material and Methods:** In the Department of General Surgery at Şanlıurfa Mehmet Akif Inan Training and Research Hospital, 92 patients were performed TEP with the diagnosis of inguinal hernia between September 2016 and September 2017. The mean age of the patients was 47.2 years. Of the patients, 79 were male and 13 were female. Of the hernias, 77 were indirect, 10 were direct, and 5 were both direct and indirect.

**Results:** The duration of the operation was 45 minutes (25-65). Four patients developed bleeding due to epigastric venous injury. Bleeding was controlled with the help of Ligasure (CoVidien, USA). Three patients developed seroma and one of them was performed percutaneous aspiration. In the other two patients, it spontaneously resorbed without need for any intervention. No infection was observed in the trocar site. The mean follow-up period of the patients was 11.2 months. Early recurrence developed in one patient. In the long term follow-ups of the patients, recurrence has not yet occurred. The mean duration of hospitalization was 1, 2 (1-2) days.

**Discussion:** When the literature was searched for the mean duration of operation, different results were encountered. In studies with large series, results ranging from 63 to 128 minutes have been reported for the repair of unilateral cases. In our clinical study, this time was found as 45 minutes. Epigastric venous injury was found to be at a higher rate in our series compared to the literature. However, it was not statistically significant. Hernia repair with TEP approach is a reliable method. We think that videoscopic dissection does not extend the duration of the inguinal hernia repair with laparoscopic TEP approach.

**Conclusion:** We conclude that the non-use of balloon in this study is more advantageous than standard laparoscopic surgery in terms of cost analysis.

**Keywords:** Videoscopic dissection, laparoscopy, hernia

## PP-0322 [Hernia Surgery]

# Our Postoperative Experience in Using ProGrip® Mesh

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**Objective:** To evaluate the early outcomes of using self-adhesive mesh (ProGrip®) in patients undergoing open inguinal hernia repair.

**Material and Methods:** 145 of 168 patients applied proGrip® mesh in open inguinal hernia repair between January 2015 and October 2017 were reached by telephone and requested to come for examination. From those who did not want to come to the examination, information was obtained on phone. Patients were asked about pain in the first 24 hours after the operation, wound site problem, pain longer than 3 months, time to start daily work activity, and the presence of recurrence.

**Results:** Of the 145 patients, 127 were male (87.5%) and 18 were female. All of the patients underwent unilateral hernia repair. Of these, 84 were right and 61 were left hernia. In the first 24 hours after the operation, 72 patients had pain. Of these patients, 54 were male and 18 were female. Twelve of 17 patients with a wound site problem were male. This problem was described as swelling at the wound site. According to the information received, hematoma was evacuated in 3 patients and seroma in other patients. They did not receive any infection treatment. There were a total of 6 patients who still had pain after the first 3 months following the surgery. Four of these 6 patients had a recurrence. In other 2 patients, pain regressed over time. Two of 4 recurrence patients consulted to our department again and they were re-performed hernia repair. The other 2 patients were operated in another center.

**Discussion:** ProGrip® meshes adhere to the area where they are placed owing to their special structures and they do not require fixing. Early and late postoperative complications are expected to be less in hernia repairs in which ProGrip® meshes are used because they do not require fixing and they cause less tension. After the inguinal hernia surgeries, chronic pain problems are encountered especially in the late period. In recent studies, it has been found that the rate of pain continuing for longer than 3 months is lower in the use of ProGrip®. In our study, in 4 of 6 patients who had pain for longer than 3 months, the cause of the pain was attributed to recurrence. Considering the pain in the first 24 hours after surgery, our study was found to be consistent with the literature. In terms of return to normal activities after surgery, our results were similar to those in literature. In the literature, in the comparison of the conventional prolene mesh and ProGrip® mesh studies, there was no difference between the two groups in the formation of seroma and hematoma at the site of the incision. In our study, the seroma rate was found to be 11%, which was consistent with the literature. The recurrence rates for the ProGrip mesh were detected to be between 0.5% and 16%. In our study, recurrence occurred at the rate of 2.7%.

**Conclusion:** In conclusion, recurrence, seroma, hematoma, and postoperative early pain after the use of ProGrip® mesh are consistent with the literature. The pain decreases after the postoperative 3rd month and the duration of return to normal life is shortened.

**Keywords:** ProGrip®, inguinal hernia, hernia pain

## PP-0323 [Hernia Surgery]

# Comparison of Titanium Mesh and Polypropylene Mesh in Patients Undergoing Anterior Mesh Hernioplasty with the Diagnosis of Inguinal Hernia

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**Objective:** In the anterior approach to inguinal hernioplasty operations, there is no standard patch. In this study, titanium (Ti mesh light, 35 g/m<sup>2</sup>) and polypropylene (Prolen mesh, heavy, 80 g/m<sup>2</sup>) patches were examined in patients operated with lichtenstein method for inguinal hernia and the analysis of the obtained data was aimed.

**Material and Methods:** The data (length of hospitalization, orchitis, seroma, hematoma, infection, patch reaction, chronic pain and recurrence) of 224 patients undergoing titanium and polypropylene mesh hernioplasty with anterior approach with lichtenstein method for inguinal hernia in the General Surgery Department of Ordu University Training and Research Hospital between May 1, 2014 and May 1, 2017 were retrospectively examined.

**Results:** Patients with inguinal hernia underwent inguinal hernioplasty with lichtenstein method. Of these patients, 167 were applied polypropylene mesh and 57 were applied titanium mesh. While no orchitis and mesh reaction was observed in both groups in the post-operative period, there was no statistically significant difference between the groups in terms of hospitalization, hematoma, wound site infection, seroma and neuropathic pain ( $p>0.05$ ).

**Conclusion:** The range of patches used in inguinal hernia operations is increasing with developing technology and the aim is to minimize the complications that may be caused by the patch. In our study, the data of the patients undergoing polypropylene and titanium patches were retrospectively compared and no statistically significant difference was found between two groups in terms of their postoperative outcomes ( $p>0,05$ ).

**Keywords:** Inguinal hernioplasty, titanium mesh, polypropylene mesh

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## PP-0324 [Hernia Surgery]

# The Bilateral Diaphragm Morgagni Hernia with Colon and Stomach Herniation in an Adult Patient

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**Introduction:** We wanted to share a case of herniation of two intraabdominal organs (stomach and colon) from the right and left sides of the diaphragm because it is a rarely seen condition and such cases are not encountered in the literature.

**Case:** A 57-year-old male patient was admitted to the emergency department with the complaint of vomiting preventing the oral intake and accompanied by dyspnea and abdominal pain for 3 days. At admission, his arterial blood pressure was 130/90 mm/hg, pulse rate was 125 beats/min, and oxygen saturation (sat-o<sub>2</sub>) was 89. There was defense in the upper abdominal quadrant and epigastric region. Air-fluid levels were present in the right and left hemithorax in the chest x-ray. With the computerized tomography (CT), the diagnosis of a diaphragmatic hernia due to the herniation of the colon into the right hemithorax and the herniation of the stomach fundus into the left hemithorax was established. Because of the low level of sat-o<sub>2</sub>, the patient was operated with transabdominal approach after necessary preparations. It was found that the transverse colon hepatic flexure was herniated into the right hemithorax with the omentum and stomach fundus was herniated into the left hemithorax. Both hernia sacs were dissected and then excised. The diaphragm was primarily repaired due to the lack of tension. The patient was discharged on the 3rd day. In the control chest X-ray taken in the 1st month, no pathologic finding was detected.

**Conclusion:** Morgagni hernia was first described by Giovanni Battista Morgagni. It constitutes 2-3% of all diaphragm hernias and also 2-4% of non-traumatic diaphragm hernias in adults. It arises from the Foramen Morgagni (Larrey space) region in the diaphragm. The most common herniated organ is the omentum and the colon, the small intestine, stomach and other intraabdominal organs follow it. Our case had colon and stomach herniation. This hernia develops on the right side at the rate of 90% and bilaterally at the rate of 8%. Patients usually present with the complaints of respiratory distress, abdominal pain and vomiting. The diagnosis of the disease is usually established through direct radiography. However, differential diagnosis and definite diagnosis may always require computed tomography (CT) because the abdominal organs that are herniated into the thorax will appear as a mass in the thorax. The treatment is always the surgery. Transabdominal approach is preferred to transthoracic approach since the reduction and dissection of herniated intraabdominal organs are easier and differential diagnosis of other

acute abdominal pathologies can be performed. The choice of open surgery or laparoscopic surgery for the transabdominal approach is usually dependent on the knowledge and skill of the surgeon. Approximately 90% of the Morgagni hernias have a hernia sac. There is no consensus on the removal of the hernia sac in the operation. It is reported that hernia sac was not removed in more than half of 140 cases examined in the literature. Kuster et al. did not recommend the removal of hernia sac because it would result in massive pneumomediastinum that could lead to respiratory and circulatory complications. We preferred open surgery in our case. The hernia sac in both diaphragm regions was dissected and excised and repaired primarily due to the lack of tension. We did not prefer mesh. Pneumomediastinum and pneumotorax did not develop.

In conclusion, this rare pathology should be remembered especially in patients with acute abdomen complaints accompanied by respiratory problems. We think that the incidentally detected Morgagni hernia cases should be operated before they become complicated.

**Keywords:** Morgagni, diaphragm hernia, acute abdomen

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## PP-0325 [Hernia Surgery]

# Retrospective Comparison of Titanium and Polypropylene Meshes in Patients Undergoing Anterior Onlay Mesh Hernioplasty with the Diagnosis of Ventral Hernia

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**Objective:** In the anterior approach to ventral hernioplasty operations, there is no standard use of patch. In this study, titanium (Ti mesh, light, 35 g/m<sup>2</sup>) and polypropylene (Prolene mesh, heavy, 80 g/m<sup>2</sup>) patches were examined in patients who underwent anterior onlay mesh hernioplasty with the diagnosis of ventral hernia and the analysis of data was aimed.

**Material and Methods:** The data of 129 patients undergoing anterior onlay titanium and polypropylene mesh hernioplasty for the diagnosis of ventral hernia in the General Surgery Department of Ordu University Training and Research Hospital between May 1, 2014 and May 1, 2017 were retrospectively examined.

**Results:** Patients with ventral hernia were performed hernioplasty with onlay titanium and polypropylene mesh. Of these patients, 88 were applied polypropylene mesh and 41 were applied titanium mesh. While no recurrence and mesh reaction was observed in both groups in the post-operative period, there was no statistically significant difference between the groups in terms of hospitalization, infection, hematoma, wound site infection, and seroma ( $p > 0.05$ ).

**Conclusion:** The use of patch in ventral hernia operations have almost become standard and the range of patches has increased with developing technology. The patches used in the hernia operations are classified among themselves and in our study, patches having different contents with the standards of light and heavy patches were compared. Of the used patches, the titanium one was light weighted and polypropylene one was heavy weighted. In our study, there was no statistically significant difference in the postoperative outcomes between two groups for whom these patches were used ( $p > 0,05$ ).

**Keywords:** Ventral anterior hernioplasty, titanium mesh, prolen mesh

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## PP-0326 [Hernia Surgery]

# Spontaneous Ruptured Direct Inguinal Hernia and Small Bowel Meso Separation

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**Introduction:** It is not a common complication of hernia that the direct inguinal hernia spontaneously ruptures from the skin and the eviscerated small intestines are separated from their meso. In the literature, there are such spontaneous rupture of femoral hernia, recurrent inguinal hernias, or incisional hernias, but no primary direct inguinal hernia has been reported. For cases of incisional hernia with spontaneous rupture in Poland and ruptured femoral hernia in Singapore have been reported. In this study, a direct inguinal hernia case with spontaneous rupture, which has not been reported previously in the literature, is presented.

**Case:** A 44-year-old female patient was admitted to the emergency unit in Antalya Training and Research Hospital with the complaints of rupture in the right groin and the protrusion of the small intestine. The patient was examined in the emergency service. It was learned from the anamnesis of the patient, who appeared very weak, that she had inguinal swelling for a long time and that her skin was torn due to severe cough on the day of the event and bleeding occurred in association with the protruded intestines. The patient and her relatives were questioned in detail for possible trauma or from legal aspect. It was understood that the event was spontaneous. In the physical examination, a 2 cm well-circumscribed skin opening in the right inguinal region and an about 1 meter necrotic small intestine segment separated from its meso were observed. The patient was operated urgently. The small intestine segment separated from the meso was resected and end-to-end enteroenterostomy was performed. The opening area in the right inguinal area was sutured. The patient, whose oral intake was initiated on the postoperative 3rd day, was discharged on the 5th day with healing. When the patient completed the postoperative 3rd month without any problems in the follow-ups, she was electively operated for right direct inguinal hernia and mesh herniorrhaphy was carried out. She was discharged without complications.

**Conclusion:** Inguinal hernias constitute 75% of all hernias. They are seen in a 25 times higher rate in men than in women and 2/3 of inguinal hernias are indirect hernias. Direct inguinal hernias are also encountered 10 times more frequently in males. Spontaneous rupture is theoretically possible in all types of hernias, but generally reported in incisional hernias. Spontaneous rupture can occur in situations such as constipation, coughing, straining, and heavy lifting, which increase the intraabdominal pressure. Other factors that may cause the rupture are the corsets or clothes used by the patient, which can cause squeezing or crushing. The difference of this case is that the patient was female and weak and the hernia was direct and developed spontaneous rupture. No similar case has been reported in the literature. As a result, it should not be forgotten that the hernia, either direct or incisional, is a disease that must be treated electively before the development of complications. In this study, we presented a case of inguinal hernia that was spontaneously ruptured and resection of small intestine segment after separation from its meso, which can be seen very rarely.

**Keywords:** Direct inguinal hernia, meso separation, spontaneous hernia rupture

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## PP-0327 [Hernia Surgery]

# Acute Intestinal Obstruction Case Secondary to Left Paraduodenal Hernia: Case Report

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Paraduodenal hernias are the most common type of internal abdominal herniation and they are a rare cause of acute intestinal obstruction. The left paraduodenal hernia is 3 times more common than the right paraduodenal hernia. While it is rarely defined in the preoperative period, its diagnosis can be made by abdominal imaging performed during the symptomatic period. Delays in diagnosis and surgical treatment can cause high morbidity and mortality. In this study, a patient who was admitted due to the complaints of nausea, vomiting and abdominal pain, operated with internal herniation pre-diagnosed in the abdominal computed tomography, and peroperatively found to have left paraduodenal hernia was presented.

**Keywords:** Internal hernia, intestinal obstruction, landzert fossa, left paraduodenal hernia

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## PP-0328 [Hernia Surgery]

# Foreign Body-Induced Perforation in Incarcerated Incisional Hernia: A Case Report

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The perforation of the gastrointestinal system due to ingested foreign bodies may manifest itself with different clinical pictures, and the correct diagnosis is rarely established preoperatively. In our case, foreign body-induced (chicken bone) perforation without strangulation was detected in a patient operated with the pre-diagnosis of small intestine perforation secondary to incarcerated incisional hernia. It should not be forgotten that if a possible foreign body in the incarcerated bowel segment cannot progress due to angulation in the tract, it may cause ulceration and perforation on the intestinal wall. Computed tomographies of patients should be interpreted carefully considering that there may be foreign bodies in the herniated area.

**Keywords:** Small bowel perforation, incarcerated incisional hernia, chicken bone, foreign body

## PP-0329 [Hernia Surgery]

## A Rare Case: Left Paraduodenal Hernia

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**Introduction:** Paraduodenal hernia (PH) is the most common type of internal herniation. It appears more often on the left side. In this article, a case of left paraduodenal hernia (LPH) will be presented.

**Case:** A 47-year-old male patient was admitted to the emergency service with the complaint of abdominal pain ongoing for a day. The patient's pain was intermittent. The complaints of nausea and vomiting also accompanied abdominal pain. It was learned that the last gas-stool discharge of the patient was 2 days ago and he had similar complaints for 10 years and they usually healed with symptomatic treatments. He had no history of a known additional problem, drug use or previous operation. Sensitivity and defense were detected in the umbilical region and left quadrants in the abdominal examination of the patient, but no significant distention was detected. There was no abnormality in the direct abdominal radiography in standing position. Blood values were not found to be pathological except for the value of leukocyte as 11800/ $\mu$ L. Although the abdominal computed tomography (CT) did not reveal a pathognomonic finding, suspicious signs were reported in terms of LPH. Emergency operation was recommended to the patient. In the laparotomy, approximately 50 cm small intestine loop was herniated from a defect near the Treitz ligament towards the retroperitoneum, there was no necrosis, and there was minimal dilatation in the intestinal loops. After the intestine loops were reduced to the abdomen, the hernia sac entry was sutured with absorbable suture. The oral intake of the patient was initiated on the 2nd postoperative day and he was discharged on the 4th day. No problems were encountered in his follow-ups.

**Discussion:** LPH is a condition that is usually caused by abnormal rotation of midgut. It is characterized by the entrance of intestine loops into the area known as Landzert fossa in the lateral area of the 4th part of the duodenum. Patients mostly consult with abdominal pain intermittently going on for a long time and the complaints of nausea, vomiting, and inability to defecate can also be reasons for admission. In physical examination, different findings depending on the degree of ileus and peritonitis can be encountered. In X-ray, air fluid levels and clustered intestine loops in the LPH can be seen. Abdominal computed tomography (CT) is usually successful at diagnosis, but the symptoms of LPH may be similar to those of many intraabdominal pathologies and this can lead to delayed diagnosis or misdiagnosis when not evaluated carefully. Despite imaging methods, LPH cases that can be diagnosed only by laparotomy are not rare. Laparoscopic or open method may be preferred for the treatment of LPH. Firstly, the intestine loops in the LPH sac are reduced into the abdomen. Primary repair of the sac entry is the most preferred method. The sac entry can be left by expanding or the hernia sac can be excised completely. If necrosis is present in the intestine loops, resection can be required and the morbidity and mortality rates of these patients are higher.

**Conclusion:** LPH is a rare cause of acute abdomen. The early diagnosis is very important for the life of the patient who are generally admitted with the picture of intestinal obstruction.

**Keywords:** Paraduodenal, hernia, left, abdominal pain

## PP-0330 [Hernia Surgery]

## Laparoscopic Morgagni Hernia Repair in an Adult Patient

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Morgagni hernia was first described in 1769. It is a rare type of diaphragm hernia. It is congenital and it results from the inadequate junction of diaphragm. It is usually asymptomatic and more common in women. When it becomes symptomatic, it can cause acute abdomen findings such as obstruction. The most herniated organs are the omentum and the transverse colon. A 84-year-old male patient presented with the complaints of vomiting and abdominal pain to the emergency unit and he was found to have obstruction associated with Morgagni hernia. Diaphragmatic hernia repair was performed with dual mesh by laparoscopic method. The patient was discharged without any problems. No recurrence was observed in the thoracoabdominal computed tomography taken in the postoperative 6th month.

**Keywords:** Laparoscopic repair, morgagni hernia, treatment

## PP-0331 [Hernia Surgery]

# Our Experience of Laparoscopic Inguinal Hernia

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**Objective:** Inguinal hernia surgery is one of the most common elective operations in general surgery practice. The inguinal canal anatomy differs anteriorly and posteriorly. In the laparoscopic surgery performed with posterior approach, the closure of direct, indirect, and femoral hernia points displays difference compared to the open technique because myopectineal orifice is closed with patch. In this study, we will present our clinic's experiment in laparoscopic inguinal hernia.

**Material and Methods:** Patients who were diagnosed with inguinal hernia and treated laparoscopically in the HSU Sultan Abdülhamid Han HARC Department of General Surgery between 2012 and 2017 were included in the study. Both extraperitoneal (TEP) and transabdominal (TAPP) approaches were used. A dissection balloon was used for TEP in cases administered general anesthesia. In both approaches, a supraumbilical 10 mm camera port and two 5 mm study ports were used. After the hernia sac was peritonealized, a 10 x 15 cm sized patch was fixed to the cooper ligament with a wire stapler to close the myopectineal orifice in the medial area and it was fixed to the transvesus abdominis muscle in the lateral area.

**Results:** Of the 58 patients in our study, 56 were male and 2 were female. 26 of these patients had right, 14 left and 18 bilateral inguinal hernia. In our cases, 3 of right inguinal hernia cases and 1 of left inguinal hernia cases were recurrent cases. The mean age of our patients was 34 (21-67) years and 83.2% of the cases were operated with TEP and 13.8% with TAPP method. The mean duration of surgeries was calculated as 62 min (45-110). In the postoperative period, seroma was detected in 3 patients and treated conservatively. There was no postoperative wound site infection. When the pain score was evaluated, the mean VAS score was evaluated as 2 (1-3). The mean duration of hospitalization after the operation was found to be 2 days (1-3). In the long-term follow-ups of the cases, recurrence was detected in 2 patients (3.4%) at the early period and treated with open surgery.

**Conclusion:** In the comparison of laparoscopic inguinal hernia surgery with conventional surgery, it appears as a preferred technique with similar recurrence rates and with the advantages of laparoscopy such as less pain and early return to work.

**Keywords:** Inguinal hernia, laparoscopy, TEP, TAPP

## PP-0332 [Hernia Surgery]

# Stenosis of Garre: Abdominal Strangulation in Reduced Inguinal Herni

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**Introduction:** In recent years, conservative observation has been replacing surgery in the management of small-bowel obstruction. On the other hand, in obstruction patients without history of operation, surgical treatment has been prioritized. Therefore, the history of operation in the anamneses of patients is very important. In the retrospective studies by Garre, it was reported that narrowing of the intestinal lumen with ischemia and fibrosis developing with venous stasis in the incarcerated intestine segment caused delayed intestinal obstruction. In our study, a case of intestinal stenosis of Garre with bowel obstruction recurring after incarcerated inguinal hernia repair was presented.

**Case:** A 47-year-old male patient was admitted to the emergency unit due to incarcerated inguinal hernia that caused acute mechanical intestinal obstruction and an emergency operation was planned. In the operation, the 10cm small intestine segment was observed to be hyperemic and edematous, the peristalsis was preserved, and the intestinal color was improved after the application of warm compress. The segment was reduced into the abdomen. The inguinal hernia defect was repaired in accordance with the Lichtenstein technique. The patient was discharged on the 2nd postoperative day. On the postoperative 11th day, the patient was admitted to emergency service because of abdominal pain. The intravenous contrast-enhanced tomography of the abdomen revealed dilatation in the small intestine, minimal increase in ileum wall thickness, and free fluid. After the conservative follow-up, the obstruction of the patient was regressed and he was discharged after 4 days. On the postoperative 22nd day, the patient consulted again and he was recommended to be followed up in the outpatient clinic because of no obstruction. On the 28th postoperative day, he was re-admitted to the emergency unit with distention and defecation. He was hospitalized and diagnostic laparoscopy was performed. At the exploration, it was seen that the small intestine loops were dilated and edematous, and there was intraabdominal diffuse free fluid. Thickening and fibrotic changes were observed in the approximately 10 cm ileal bowel loop in the 30 cm proximal area of the ileocecal valve. With the 5cm incision made from the right lower quadrant, this intestine loop was removed outside the abdomen and resected. Intestinal continuity was provided by

ileo-ileal anastomosis with stapler. The patient was discharged without any problems on the postoperative 7th day. The pathological examination of the resected intestinal segment was reported as narrowing of the intestinal lumen, ulceration, granulation tissue, mixed type inflammatory infiltration in serosal areas, and fibrosis.

**Conclusion:** Abdominal symptoms after strangulated inguinal hernia repair were first defined by Richter. In 1892, a benign fibrous stricture developing after the reduction of strangulated inguinal hernia was described by Garre et al. Histopathological studies have shown that necrosis develops in the intestinal wall in long-term ischemia and mucosal ulcerations and fibrosis develop in short-time ischemia. It is difficult to define the intestinal stenosis of Garre because of the different causes of obstruction such as postoperative adhesions, recurrence and patch migration. In our case, physical examination, blood tests and radiological examinations were inadequate for diagnosis and the diagnosis of the patient was established through diagnostic laparoscopy. It should not be forgotten that intestinal stenosis of Garre can also be seen in the non-operated and reduced cases of hernia.

**Keywords:** Stenosis of garre, inguinal hernia, strangulation, intestinal obstruction

## PP-0333 [Hernia Surgery]

# Our Laparoscopic Ventral Hernia Experience

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**Objective:** A common complication of abdominal surgery is incisional hernia. Ventral hernias constitute approximately 5-6% of all abdominal wall hernias. Various techniques have been developed in the surgery of ventral hernia. The first laparoscopic ventral incisional hernia repair (LVHR) was reported by LeBlanc and Booth in 1993. In this study, we aimed to examine laparoscopic ventral hernia repairs in our clinic demographically.

**Material and Methods:** The study included laparoscopic ventral hernia cases in Adnan Menderes University between December 2014 and February 2017. The ethics committee approval was not obtained because it was included retrospective file scanning. Patients' ages, sexes, hernia sizes, durations of hospital stay, complications, and recurrence follow-ups were recorded.

**Surgical Technique:** The abdomen was insufflated until the intraabdominal pressure value of 12 mmHg by entering from the right or left lateral region with 12 cm trocar with open vision under general anesthesia. Subsequently, two study trocars were inserted into the left and right lateral sides of this trocar to reveal the hernia defect. After forming strong fascia edges, dual mesh was inserted into the abdomen through the 12 cm trocar. It was fixed on the abdominal wall with an absorbable tackler and the operation was terminated.

**Results:** Forty-two patients were included in the study. Of them, 30 (71%) were female and 12 (29%) were male. 24 (57%) had recurrent ventral hernia. The mean age was calculated as 42±6.7 years. The average fascia defect size was calculated as 8 cm (min: 3 cm, max: 15 cm). The mean duration of hospital stay was 2.1 days. The mean duration of operation was 42 minutes. The patients started liquid food on the postoperative 1st day and normal food on the postoperative 2nd day. It was observed that drain was not used in any patient. One patient (2.3%) developed hematoma and 1 (2.3%) patient developed ileus. No other complications were observed. The mean duration of follow-up was 6.2 months and recurrence was observed in 2 (4.6%) patients.

**Conclusion:** The ventral hernia repair has many types and its recurrence rates with simple suture are reported to be high. In randomized controlled trials comparing laparoscopic and open ventral hernia repairs, recurrence and complication rates are reported to be lower in laparoscopic repair. In our study, these rates were found as 2-3%. Laparoscopic ventral hernia repair is a method that shortens the duration of operation and provides convenience for the surgeons especially in recurrent defects.

**Keywords:** Laparoscopic ventral hernia, dual mesh, recurrence complication

## PP-0334 [Hernia Surgery]

# A Rare Complication After Bilateral TEP Hernia Repair: Entire Body Emphysema

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The main minor complications associated with laparoscopic inguinal hernia repair are seroma, hemorrhage, abdominal ecchymosis, neuralgia, urinary retention, and subcutaneous emphysema. Subcutaneous emphysema is among the complications that

can be observed after TEP procedure and its spread to the entire body rarely occurs. Smoking cigarette is the most common cause of emphysema. Of the patients with emphysema, 85% are smokers. The simplest diagnostic method is PA AC radiography. Our patient was also smoker. A 52-year-old patient, who had a palpable swelling particularly in the right groin for one year, consulted to an external center and surgery was recommended. Then, the patient was admitted to the outpatient clinic of general surgery and hospitalized after planning TEP operation due to the bilateral femoral hernia. The patient was taken into operation under elective conditions and nilateral TEP operation was performed. The patient's saturation dropped in 6 hours after the operation and the entire body emphysema starting from the lungs developed. After TEP operation, lung and entire body emphysema may develop. Therefore, close saturation monitoring and clinical follow-up of the patient are important. Close follow-up with monitoring is important for patients who are likely to develop emphysema after TEP.

**Keywords:** Emphysema, hernia, TEP

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## PP-0335 [Hernia Surgery]

# Superiority of Laparoscopic Surgery Over Open Surgery in Inguinal Hernia Repair

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**Objective:** To emphasize the necessity of laparoscopic total extraperitoneal approach regardless of the size or type of the hernia when there is no objection to the administration of general anesthesia in patients diagnosed with inguinal hernia.

**Material and Methods:** In the study, 140 patients admitted to our clinic due to inguinal hernia between the years of 2016 and 2017 were evaluated. Of these patients, 70 were performed open surgery and the others were performed laparoscopic surgery. In the laparoscopic surgery, 3 trocars were used in the median line. Mesh was used in both techniques. For mesh fixation, stapler or fibrin glue was used.

**Results:** During this period, recurrence was detected in 5 of patients who underwent open surgery and called for control. Their repairs were done laparoscopically. Of the patients undergoing open surgery, 11 had scrotal edema, 3 had surgical site infection, and 2 had persistent pain. The durations of hospital stay were about the same, but there was a difference in terms of return to work. No complication occurred in all patients undergoing laparoscopic repair.

**Conclusion:** Laparoscopic repair should be preferred because it provides patient comfort, a safe surgery, and less complications.

**Keywords:** Open surgery, inguinal hernia, laparoscopy, total extraperitoneal

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## PP-0336 [Hernia Surgery]

# Results of Laparoscopic Transabdominal Preperitoneal Repair

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**Objective:** Laparoscopic Transabdominal Preperitoneal Repair (TAPP) method is one of the methods recently preferred in inguinal hernia operations in general surgery practice. The aim of this study is to evaluate the cases of inguinal hernia treated with TAPP in the Department of General Surgery at Cumhuriyet University Research and Application Hospital.

**Material and Methods:** This is a retrospective study on patients diagnosed with inguinal hernia, who underwent TAPP in the Department of General Surgery between 2016 and 2018. Demographic data of the patients and hernia types were retrospectively analyzed.

**Results:** Between 2016 and 2018, laparoscopic surgery was performed on 30 patients with inguinal hernia in our clinic. 5 of these patients were female (16.7%) and 25 (83.3%) were male. 22 patients (73.3%) had direct and 8 patients (26.7%) had indirect hernia. On the other hand, 5 patients had bilateral hernia (16.7%) and 25 patients had unilateral hernia (83.3%). Three patients (10%) had recurrence hernia. All of these cases were applied mesh. The duration of hospitalization varied from one to two days



in these patients. Cholelithiasis was detected in one of the patients before the operation. This patient underwent laparoscopic cholecystectomy with hernia operation. After this procedure, none of the patients developed any postoperative complications, especially wound site infection. The vital and biochemical signs of the patients were stable and the patients were discharged without any problems.

**Conclusion:** Laparoscopic TAPP is a method that can be preferred in inguinal hernias because of its reducing the length of hospital stay, decreasing postoperative complication rate, decreasing the risk of wound site infection, and thus maintaining the quality of life of patients at optimal level.

**Keywords:** Laparoscopic transabdominal preperitoneal repair, inguinal hernia

## PP-0337 [Hernia Surgery]

# Is Mesh Size Important in Laparoscopic Total Extraperitoneal Repairs?

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**Objective:** To emphasize that the size of mesh used in hernia repair is important for patient comfort and tissue reaction and therefore, unnecessary size of mesh should not be used.

**Material and Methods:** In 30 patients with indirect hernia between 2015 and 2017, the sizes of meshes prepared by measuring only the internal ring and adding 5 cm to the size of the ring were between 6 and 8 cm. And, the other 30 patients were applied standard 6x15 cm meshes. The surgical technique was the same in all. In the median line, 3 trocars and 30 degree optics were used. In the first group, after the hernia sac was separated from the cord, a dissection in the size of the mesh was performed. In the other group, a wide dissection was performed until the iliac wing and psoas muscle.

**Results:** In the average one-year follow-ups of the patients for whom mesh was designed according to the internal ring, it was observed that the patients had less pain and tissue softness due to mesh reaction was significantly less with palpation in the dissection area. In addition, there was no seroma since no extensive dissection was performed in the postoperative period. While the mean duration of operation was 30±5 min, it was 60±5 min in the group performed wide dissection. Moreover, seroma was detected in 7 patients in this group.

**Conclusion:** In the laparoscopic total extra peritoneal approaches, designing the mesh size after measuring the internal ring is more useful for the patient in every aspect.

**Keywords:** Internal ring width, laparoscopic total extraperitoneal repair, mesh size

## PP-0338 [Hernia Surgery]

# What to Do if the Peritoneum is Torn During Laparoscopic Total Extraperitoneal Repair?

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**Objective:** To demonstrate that surgery can be continued by managing the complications that may occur in surgical site during non-invasive surgery.

**Material and Methods:** Twenty patients whose peritoneums were torn from several points while performing dissection during total extraperitoneal repair in 2017 were included in the study. In these patients, 3 trocars were used in the median line. The peritoneum was closed by suturing with 3/0 polyglactin.

**Results:** In the postoperative follow-ups of these patients, it was noticed that there was no difference from the process performed without peritoneal tear. Only a slight distention was observed because the CO<sub>2</sub> escaped into the abdomen. It was resorbed in a very short time after the surgery. This situation did not affect the patient in the negative direction. Only the duration of the operation was observed to be prolonged.

**Conclusion:** In case of peritoneal rupture in experienced centers, the defect should be repaired and the operation should be continued.

**Keywords:** Laparoscopy, peritoneal tear, total extraperitoneal repair

## PP-0339 [Hernia Surgery]

# Hydatid Cyst in the Inguinal Canal

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**Introduction:** Hydatid cyst is a common health problem in underdeveloped countries. The liver and lung are the organs in which this disease is most frequently seen. In the literature, the cases of hydatid cyst seen in the inguinal canal is very rare.

**Case:** A 55-year-old female patient presented with the complaints of palpable swelling and pain in the right inguinal region. In the abdominal tomography, calcified lipoma or cyst was detected in the inguinal canal. Hydatid cyst vesicles were seen in the inguinal exploration and they were excised. The canal was washed with hypertonic solution. Primary inguinal hernia repair was performed. The patient was discharged on the postoperative 1st day. The result of pathological evaluation was reported as hydatid cyst. Albendazole was administered to the patient postoperatively.

**Conclusion:** Hydatid cyst is very rarely seen in the inguinal canal. Ultrasonography, computerized tomography and serological testing may be helpful in the diagnosis.

**Keywords:** Cyst hydatid, inguinal canal, inguinal pain

## PP-0340 [Hernia Surgery]

# Obturator Hernia: Two Case Reports

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**Introduction:** Obturator hernia (OH) is a type of hernia that occurs as a result of the herniation of the intraabdominal organs from the obturator foramen into the pelvis. It usually appears in old and thin women. In this article, data of two patients operated for OH were presented.

**Case-1:** A 73-year-old female patient presented with the complaints of severe abdominal pain, nausea and vomiting to the emergency unit. It was learned that her abdominal pain was present intermittently for 1 year and she received palliative medical treatments. The patient had a history of coronary angiography and hypertension, but no history of operation. Her body mass index (BMI) was calculated as 19. In the physical examination (PE), there was sensitivity and defense in the abdomen. The Howship-Romberg sign was detected to be positive. In the laboratory values, leukocyte value was measured as 11400/μL and other laboratory values were normal. The patient had air fluid levels in the direct radiography. The abdominal computed tomography (CT) revealed bilateral OH, which was more prominent on the left side. The patient was scheduled for an emergency operation. In the laparotomy performed with subumbilical midline incision, it was seen that the proximal small intestines were dilated and the distal jejunal loops were herniated into both obturator canals. The herniated small intestine segments were reduced and no ischemia signs were found. Bilateral obturator foramens were primarily closed with polypropylene suture. In the postoperative period, the patient had no complication and was discharged on the fifth day.

**Case-2:** An 85-year-old female patient was admitted to the emergency service with the complaints of abdominal pain, nausea, and vomiting continuing for 2 days. It was learned that her complaints continued for 6 months. She had no history of a known comorbidity or previous operation. Her BMI value was calculated as 18. In the PE, she had tenderness and defense in the abdomen. Leukocyte value was measured as 12300/μL in laboratory analysis and other values were normal. Direct radiography showed air fluid levels at the level of the small intestine. In the abdominal CT, OH on the right side and small bowel loops in the obturator canal were seen. Moreover, there was dilatation in the proximal small intestine loops. An emergency operation was planned for the patient. In the laparotomy performed with subumbilical midline incision, it was observed that 5-cm ileum loop was incarcerated into the right obturator canal in about 40 cm proximal of the ileocecal valve. Upon the view of necrosis in the related segment, resection and end-to-end anastomosis were performed. The OH defect was primarily closed with 2 0 polypropylene suture. The patient, who had no other problems except atelectasis in the postoperative follow-up, was discharged on the postoperative 10th day.

**Conclusion:** OH is a rarely encountered condition. Low BMI and multiparity can be considered as the predisposing factors. The symptoms of OH and PE findings are not specific. It should not be forgotten that although CT is often successful in its diagnosis, there are still cases that can be diagnosed intraoperatively. Delayed diagnosis and treatment may result in high morbidity and mortality due to incarceration. The classic approach to treatment is open surgery, but cases with successful results with laparoscopy have been reported in recent years. Early diagnosis and treatment is life-saving in obturator hernia.

**Keywords:** Obturator hernia, small intestine obstruction, ileus, abdominal pain

## PP-0341 [Hernia Surgery]

## Emergency Inguinal Hernia Repairs: Clinical Series

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**Objective:** The incidence of inguinal hernias (inguinal and femoral hernia) is estimated to be 5-10%. Femoral hernias constitute less than 10% of inguinal hernias, but approximately 40% of cases present with emergencies such as incarceration and strangulation. The risk of incarceration and strangulation is estimated to be between 0.3% and 3% in the inguinal hernias. In this study, long term outcomes of inguinal and femoral hernia cases operated because of incarceration and strangulation in emergency conditions in our clinic were presented.

**Material and Methods:** In this study, 19 patients undergoing inguinal hernia repair under emergency conditions in our clinic between 2009 and 2017 were evaluated retrospectively. Patients' data on age, gender, type of surgery and long-term outcomes are given.

**Conclusion:** The occurrence of inguinal and femoral hernia cases operated for incarceration under emergency conditions mostly at advanced age and the necessity of additional interventions such as bowel resection can extend the duration of hospitalization. However, a properly performed repair can prevent the recurrence even in operations performed under emergency conditions.

**Keywords:** Emergency, inguinal hernia, inguinal, femoral

## PP-0342 [Hernia Surgery]

## Emergency Ventral Hernia Repairs: Clinical Series

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**Objective:** The definition of ventral hernia includes the abdominal wall hernias and is divided into subheadings such as umbilical hernia, epigastric hernia, spigelian hernia, and incisional hernia. Incarcerated ventral hernias constitute one of the most common causes of small bowel obstructions, but there may be difficulties in the diagnosis despite good physical and radiological examinations. In this study, the data of the patients operated in our clinic due to incarcerated ventral hernia between 2009 and 2017 were presented.

**Material and Methods:** The age, gender, type of surgery and long-term outcomes of the patients who were operated in our clinic due to incarceration between 2009 and 2017 are given.

**Conclusion:** The occurrence of ventral hernia cases operated for incarceration under emergency conditions mostly at advanced age and the necessity of additional interventions such as bowel resection can extend the duration of hospitalization compared to elective surgeries. However, a properly performed repair prevents recurrence even in emergency operations.

**Keywords:** Emergency, ventral hernia, primary repair, onlay mesh

## PP-0343 [Hernia Surgery]

## Incarcerated Femoral Hernia Containing Unilateral Fallopian Tube: Case Report

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**Introduction:** Femoral hernias are more common in female patients and they are generally urgently operated because of strangulation. The existence of the fallopian tube in a strangulated femoral hernia sac is a very rare condition.

**Case:** A 50-year-old female patient was admitted to the emergency service with the complaints of swelling and pain in the inguinal region. In the examination, an irreducible hernia sac was detected in the left inguinal area. In the computed tomography evaluation, a cystic mass consistent with an 18x10 cm hernia sac with a left femoral canal localization and an edematous tubular structure thought to be including left fallopian tube were found. In the exploration, approximately 600 cc fluid and severely edematous fallopian tube was observed in the left femoral hernia sac. Because the blood supply to the fallopian tube was good, it was re-placed into the abdomen. The hernia sac was resected and hernia repair was performed with polypropylene mesh.

**Conclusion:** Femoral hernias occur 10 times more frequently in women than in men. They present with strangulation more often than other hernia types. The existence of the fallopian tube in the inguinal hernia sac is quite rare because the structure is located below the inguinal and femoral rings. In such cases, the fallopian tube and the ovary usually coexist in the hernia sac. Edema and even necrosis can be seen in the structures within the hernia sac due to strangulation. Because of the good blood supply in the fallopian tube in our case, salpingectomy was not needed.

**Keywords:** Femoral hernia, strangulated hernia, fallopian tube

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## PP-0344 [Hernia Surgery]

# Vacuum-Assisted Closure in the Management of Recurrent Incisional Hernia Treatment with Complication: A Case Report

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**Introduction:** The incidence of incisional hernia after abdominal surgery is reported to be mostly in the range of 1-3 years with the rate of 2-20% in the literature. In this case, we aimed to present our approach with vacuum-assisted wound closure in the treatment of necrotic areas on the skin after 4mg/4ml steradin infusion applied to the patient after recurrent incisional hernia surgery.

**Case:** A 42-year-old female patient was performed mesh repair for incisional hernia 2 years ago. The patient having recurrence had a history of previous appendectomy and oophorectomy due to the diagnosis of ovarian cyst about 5 years ago. She had uncontrolled DM for 10 years (using insulin). She had an atypic structure, especially pollen allergy. The patient was operated under elective conditions and the tissue defects were excised. The old mesh was completely removed. Vicryl mesh was applied due to wide tissue defect and the operation was completed. On the first postoperative day, the patient was taken to the intensive care unit due to the sudden onset of hypotensive attacks (BP: 60/40 mm hg). She was monitored and initiated steradin 4 mg/4ml infusion with appropriate dosage. The infusion was continued for about 12 hours. Because redness and necrotic areas occurred on the skin in the incision site of the patient, who was treated appropriately in the intensive care unit, she was reoperated for skin revision on the postoperative 2nd day. During the operation, it was observed that one fascia was intact and there were necrotic areas on the skin and subcutaneous areas with umbilical localization. Then, skin and subcutaneous revision was performed and the VAC-assisted closure of the defect was evaluated to be appropriate. The VAC-assisted closure was performed in 5 sessions. Moreover, the medical treatment of the patient, scheduled as antihistaminic 3 \* 1 IV, is ongoing. The skin-subcutaneous necrosis developing in association with the use of steradin was considered.

**Conclusion:** In this case, it was determined that the patient who was thought to develop steradin allergy had a history of pollen allergy diagnosis and atypic structure. Moreover, when her lifestyle was examined, it appears to be inconsistent with diabetes treatment. The risk of postoperative complications increases due to the negative effects of uncontrolled diabetes, which is a chronic disease, on wound healing. with our clinical experience, We recommend that this vacuum-assisted closure method, which has been proven successful in many complicated wound management, should also be used in the treatment of possible necrotic tissue defects developing after the treatment of giant incisional hernia.

**Keywords:** Incisional hernia, vacuum-assisted closure, wound healing

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## PP-0345 [Hernia Surgery]

# Synchronous Laparoscopic Total Extraperitoneal (TEP) Hernia Repair and Laparoscopic Cholecystectomy: A Safe Procedure

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**Objective:** Inguinal hernia repairs and cholecystectomy are the most common surgical procedures performed in general surgery clinics. With the understanding of the benefits of minimally invasive surgery, laparoscopy has become the gold standard for both surgeries. However, since graft use is routinely performed in inguinal hernia repair, there is no clear consensus on performing both surgeries in the same session. We planned this study to evaluate the safety of synchronous laparoscopic TEP hernia repair and laparoscopic cholecystectomy.

**Material and Methods:** Twelve patients with inguinal hernia and cholelithiasis were included in the study. The diagnosis of cholelithiasis was established through ultrasonography. Simultaneous intervention was not planned in patients with acute cholecystitis. The patients were firstly performed graft inguinal hernia repair with the TEP procedure and then performed laparoscopic cholecystectomy operation. The patients were postoperatively evaluated in terms of the duration of operation, duration of hospital stay, and complications.

**Results:** The mean duration of surgery was 54 minutes (42-65 min), the mean duration of hospitalization was 1 day, and the mean number of trocars was 6. No wound site or graft infection developed in any patient. Four patients were found to have spontaneously regressing seroma at the postoperative 1st month control.

**Conclusion:** With acceptable duration of surgery and short duration of hospitalization, the synchronous application of laparoscopic TAP hernia repair and laparoscopic cholecystectomy is a promising safe procedure because it does not increase the risk of graft infection, which is one of the most frightening hernia repair complications, in association with non-impaired peritoneal integrity in the graft region.

**Keywords:** Extraperitoneal, hernia, cholelithiasis, cholecystectomy

## PP-0346 [Hernia Surgery]

# Laparoscopic Repair of Recurrent Hiatal Hernia with GRAFT

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Gastroesophageal reflux is a common problem encountered worldwide. Gastroesophageal reflux surgery was first described by Rudolph Nissen in 1956 by performing 360 ° fundoplication with open technique. Later in 1963, André Toupet defined 270 ° fundoplication. With the improvement of minimally invasive surgical techniques, the first laparoscopic Nissen fundoplication was performed in 1991 and since then, laparoscopy has become the gold standard technique also in reflux surgery. In addition to the studies reporting that symptomatic recovery was provided at the rate of 90%-95% in a 10-year follow-up, recurrence despite fundoplication has been reported in patients varying from 3 to 30%. Compared to open surgery, laparoscopic approach has come advantages such as less intraabdominal adhesions, less postoperative pain, and shorter hospitalization time in recurrence cases. In anti-reflux surgery in which postoperative patient satisfaction is lower than other procedures, anti-reflux treatment is continued in approximately 62% of patients in the postoperative period. In this case, the morbidity associated with the surgery performed in patients becomes even more important. The causes of recurrence after antireflux surgery include the dehiscence of crus sutures due to tension, opening of fundoplication, and paraesophageal and sliding hernia. The primary underlying etiology of recurrence is reported as short esophagus in which adequate dissection has not been achieved and opening in inappropriate crus repair. In recurrent cases, dissection is more difficult and efficacy is lower, and morbidity is higher than in primary cases. For these reasons, tendency to open approach by many surgeons is observed in recurrence cases. In this case report presented as a video presentation, in a patient who underwent laparoscopic Nissen fundoplication with graft 10 years ago, recurrent hiatal hernia was detected in the endoscopy performed after the occurrence of similar symptoms that started in the postoperative 8th year and continued for 2 years. Recurrent hiatal hernia surgery was performed laparoscopically. In the intraoperative exploration, it was observed that the fundoplication was in good condition and there was no graft migration. Paraesophageal hernia was found to have developed from the edge of graft. The patient was performed hiatal hernia repair and a graft was placed into the area of repair. No intraoperative and postoperative complication developed in the patient. Because it is difficult to satisfy patients in antireflux surgery, the importance of morbidity and quality of life increase. Therefore, it should not be forgotten that primary repairs should be standardized as much as possible and laparoscopy should be given a chance in recurrence cases. This video presentation aims to raise awareness about the applicability of laparoscopy in recurrence cases.

**Keywords:** Hernia, hiatal, laparoscopy, recurrence

## PP-0347 [Hernia Surgery]

# Comparison of Laparoscopic Total Extraperitoneal and Open Inguinal Hernia Repair Techniques

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**Objective:** Laparoscopic inguinal hernia surgery is a technique that is increasingly becoming widespread in recent years. In our study, laparoscopic total extraperitoneal repair (TEP) and open inguinal hernia repair techniques were compared for a period of 13 months.

**Material and Methods:** Patients who underwent laparoscopic TEP and open surgical repair (liechtenstein) surgery in our clinic between 2017 and 2018 were evaluated retrospectively. Of the 67 patients included in the study, 54 were followed up over a 12-month period. The patients were requested to come for control examinations in the outpatient clinic in the postoperative 1st, 3rd, 6th, 9th and 12th months postoperatively.

**Conclusion:** Of 54 patients included in the study, 17 (31%) were performed open surgical inguinal hernia repair and 37 (69%) were performed laparoscopic TEP repair. Recurrence was found in 1 of 17 patients in the open surgery group (5%) and in 1 of 37 patients in the laparoscopic TEP group (2.7%). Laparoscopic TEP repair is a procedure that can safely be applied in terms of recurrence rates in inguinal hernia repair.

**Keywords:** Laparoscopic surgery, inguinal hernia, TEP

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## PP-0348 [Hernia Surgery]

# A Complication of Lost Gallstones after Cholecystectomy: Incarcerated Indirect Inguinal Hernia

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**Introduction:** During laparoscopic cholecystectomy, spilled gallstones are not an uncommon situation. In this study, we wanted to present a patient admitted to the emergency unit with incarcerated indirect inguinal hernia after missing gallstone after laparoscopic sac operation and forgotten metallic clip.

**Case:** A 62 year-old male patient had a history of laparoscopic cholecystectomy operation performed 2 years ago. The patient was admitted to the emergency unit due to irreducible swelling in the right groin, which occurred one hour ago. A painful irreducible mass was palpated in the right inguinal region in the examination. In superficial tissue ultrasonography, the result was consistent with incarcerated hernia. The patient was taken into the operation with the diagnosis of incarcerated inguinal hernia. In the operation performed with right inguinal incision, the indirect hernia sac and a hard foreign body inside it were palpated. When the sac was opened, gallstone and a metallic clip material used in the previous cholecystectomy were observed. Following the reduction of the hernia sac into the abdomen, the hernia repair was completed with prolene mesh.

Complications of laparoscopic cholecystectomy include complications associated with both laparoscopy and cholecystectomy. Because of the perforation of the gallbladder during laparoscopic cholecystectomy, the distribution and disappearance of gallstones in the abdomen is more commonly encountered than in the conventional cholecystectomy and this rate varies between 1% and 20%. The perforation of the gallbladder generally occurs while removing from the liver bed and perforation sometimes occurs during removal outside the abdomen due to narrow trocar site. It has also been reported that lost gallstones cause the picture of abscess in the abdomen. As in our patient, the gallstone, from lost gallstones after cholecystectomy, entering into the present inguinal hernia sac and clips caused the foreign body reaction and they presented with incarcerated hernia because they triggered the inflammatory process here.

**Conclusion:** In this case, we recommend to remember that gallstones in the perforated sac and abdomen during laparoscopic cholecystectomy and also metallic clips can present with the picture of incarcerated hernia and gallstones and metallic clips should be removed in order to prevent possible complications in the abdomen during cholecystectomy.

**Keywords:** Incarcerated indirect inguinal hernia, laparoscopic cholecystectomy, lost gallstone

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## PP-0349 [Hernia Surgery]

# Comparison of the Results of Cases with Fixed and Non-Fixed Patch in Laparoscopic Total Extraperitoneal Hernia Repair

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**Objective:** Inguinal hernia repair is one of the most frequently performed surgical procedures. Transabdominal preperitoneal (TAPP) and total extraperitoneal (TEP) approaches have been defined after beginning the current use of laparoscopy. Compared to

open surgery, minimally invasive methods have become prominent owing to less pain and analgesic need in the early postoperative period, better cosmetic results, early return to work, and fewer wound site problems. However, its negative aspects such as higher costs and a longer learning curve should not be overlooked. One of the causes of postoperative pain is the staplers used to fix the patch. In our study, we compared the results of the cases with fixed and non-fixed patch in patients undergoing TEP.

**Material and Methods:** This study included 56 patients performed TEP due to inguinal hernia in our clinic between January 2016 and December 2017. Twenty-eight patients fixed patches were identified as Group 1 and 28 patients not fixed patch as Group 2. Patients' demographic data, hernia locations, body mass index (BMI), surgical duration, length of hospital stay, pain assessments, and perioperative complications were compared.

**Results:** There was no difference between two groups in terms of demographic data, hernia locations, and body mass indices. Two groups were similar with regard to duration of surgery and duration of hospitalization. When pain assessment was performed before discharge (group 1,  $1.37 \pm 0.7$ ; group 2,  $1.26 \pm 0.5$ ,  $p=0.21$ ) and at the first month controls (group 1,  $1.15 \pm 0.5$ ; group 2,  $1.05 \pm 0.3$ ;  $p=0.14$ ), pain was found to be slightly higher in the patients of Group 1, but this difference was not statistically insignificant. There was no urinary retention in both groups. Seroma was detected in 2 patients in Group 1 and in 3 patients in Group 2 ( $p=0.4$ ). There was no significant difference in terms of the mean follow-up time (group 1,  $11.3 \pm 7.16$ , group 2,  $10.8 \pm 8.1$ ,  $p=0.2$ ). During the follow-up period, no patient had infection, nerve damage and recurrence.

**Conclusion:** Recurrence, seroma, nerve injury and infection were not detected during follow-up, which shows that there is no difference between fixed and non-fixed patches. Considering the cost of the staples used for fixing and relatively lower pain at postoperative and 1st month controls, not fixing seem to be a good option. We think that these findings should be evaluated with further large case series and prospective randomized studies because of our few number of cases and short follow-up period.

**Keywords:** TAPP, TEP, patch, inguinal hernia

## PP-0350 [Hernia Surgery]

# Our 5-Year Laparoscopic Inguinal Hernia Repair Experience in Başkent University İstanbul Hospital

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One of the most common operations in daily surgical practice is the repair of the inguinal hernia. Our aim in this study is to share the data of laparoscopic total extraperitoneal inguinal hernia repair operations performed in the Department of General Surgery at Baskent University İstanbul Hospital. Patients undergoing laparoscopic surgery for the diagnosis of inguinal hernia in the Department of General Surgery at Baskent University İstanbul Hospital between January 2013 and January 2018 were analyzed retrospectively. A total of 136 patients that were performed laparoscopic total extraperitoneal hernia repair were included in the study. The mean age was 59.24 years. Minor complications such as seroma, epididymitis and hematoma were observed in the early postoperative period. There was no major complication or mortality. No recurrence and no chronic pain were observed in the follow-ups. Laparoscopic total extraperitoneal inguinal hernia repair is performed safely in our hospital.

**Keywords:** Inguinal hernia, laparoscopy, total extraperitoneal approach

## PP-0351 [Hernia Surgery]

# Ovary and Tuba in Indirect Inguinal Hernia Sac in a Case with Ectopic Kidney

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**Introduction:** It was aimed to present the herniation of left ovary and tuba in the left indirect hernia sac in a 42-year-old female patient having a known left ectopic kidney with pelvic localization.

**Case:** A 42-year-old female patient presented with the complaints of swelling and intermittent pain in the left groin, which started about 6 months ago. In the physical examination, an irreducible inguinal hernia was found in the left groin. In the ultrasonography, intraabdominal fatty tissue herniation into the left inguinal canal was observed and there was a 30x11 mm hypoechoic lesion which included small cystic areas and could not be distinguished from fat tissue in the hernia segment. It was

also reported that pelvic MR was recommended for ovary-mesenteric fatty tissue differentiation. In the pelvic MR report, it was stated that left ectopic kidney with pelvic localization was observed, and the inguinal canal was wide (28 mm) and it included an approximately 42x23 mm hypointense lesion including millimetric hyperintense cystic areas in T1A and T2A, which was firstly thought to be ovary (because the left ovary was not in normal localization). The patient was operated under elective conditions. The hernia sac was opened, seeing it was the indirect hernia. It was observed that there was the left ovary and tuba inside the hernia sac and these structures formed a wall of the hernia sac. The excess part of the hernia sac was cut, the remaining peritoneum was closed and returned to the abdomen. Lichtenstein mesh hernia repair was performed with the polypropylene mesh. On the first postoperative day, the case was discharged without any problems.

**Conclusion:** In the inguinal hernias, hernia sac most commonly includes the omentum and small intestine. In adult patients, the presence of the ovary and tuba in inguinal hernia sac is very rare. This is more common in the pediatric age group. In women at reproductive age, who have the ovary in the inguinal hernia sac, urogenital malformations have also been reported. Our patient had a known left ectopic kidney with pelvic localization, which was reported in MR examination. Although rarely seen, exploration should be performed carefully considering that inguinal hernia sac may involve the ovary and tuba in adult women and further imaging studies, if necessary, should be used in terms of urogenital malformations.

**Keywords:** Inguinal, hernia, indirect, ovary, tuba, ectopic kidney

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## PP-0352 [Hernia Surgery]

# Our Experience of Nuck Canal Cyst

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**Objective:** The Nuck canal is a remnant of the peritoneum associated with a round ligament and it can rarely cause the development of cysts in women due to its non-closure. Its diagnosis can be overlooked since women's pain in the inguinal region can frequently be confused with other causes because Nuck canal cyst is rarely encountered. In this article, we aimed to share our experience on the Nuck canal cysts.

**Material and Methods:** Patients over 18 years of age, who were admitted due to inguinal swelling and pain and operated for inguinal hernia and inguinal mass between January 2015 and December 20, were retrospectively evaluated. Only female patients were included in the study.

**Results:** Twenty female patients were operated for inguinal hernia. In 4 of the operated patients, additional radiological examinations were needed because the results of their physical examinations were not consistent with hernia. The sonographic examinations of the patients, whose ultrasonographic examinations revealed cystic lesions, were reported as the presence of cystic structures displaying continuity with tuba uterina. And, the patients were operated with the pre-diagnosis of Nuck canal cyst. The pathological findings of the materials were evaluated as findings consistent with cyst.

**Conclusion:** Nuck canal cysts are usually incidentally detected in inguinal hernia or inguinal lymph node excisions. When ultrasonography is required for the first time for suspicious inguinal hernia or palpable pathologies in the inguinal region, it is recommended to confirm the diagnosis by magnetic resonance imaging as a further examination. It should be kept in mind that Nuck canal cysts may be encountered in cases of inguinal region pathologies that cannot be definitely diagnosed.

**Keywords:** Nuck canal cyst, inguinal hernia, inguinal mass

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## PP-0353 [Hernia Surgery]

# A Rare Case: Morgagni Hernia

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**Introduction:** The development of the diaphragm occurs during the first trimester of the embryonic period. The problems experienced in this period may result in the formation of diaphragm hernias.



**Case:** A 52-year-old female patient was admitted to the emergency service with the complaints of abdominal pain, nausea and vomiting intermittently continuing for 3-4 months and exacerbating for the last two days. Except the use of drug for the diagnosis of schizophrenia, she had no history of any feature. In the physical examination (PE), epigastric tenderness and minimal abdominal distention were found. In the laboratory values, leukocyte count was 19000/ $\mu$ L, creatinine was 2 mg/dL, blood urea nitrogen was 150 mg/dL, and potassium was 2.8 mEq/L, and other values were within normal intervals. In the abdominal computed tomography (CT) performed without contrast agent due to high value of creatinine, it was observed that the stomach, small intestine, and mesenteric fat tissue were herniated from the defect in the anterior right diaphragm into the right hemithorax. The patient, whose symptoms were regressed and general condition was recovered after the nasogastric decompression, was followed-up medically and the operation was planned to be performed under semi-elective conditions. During follow-up, the general state and laboratory values of the patient returned to normal and she was operated. The surgery was laparoscopically started with a 10-mm camera port entered supraumbilically and one 12-mm and two 5-mm trocars inserted from the subcostal areas and the epigastric region. A 5x5 cm hernia defect was seen in the anterior part of the diaphragm with the small intestine, stomach, and omentum extending towards the thorax in it. Since the organs in the hernia sac could not be taken into the abdomen laparoscopically, laparotomy was performed with supraumbilical midline incision. The stomach, small intestine and omentum filling the right hemithorax in the hernia sac were pulled back into the abdomen. With sutures with the help of Reverdin needle, the posterior and anterior wall of the defect was fixed to the anterior wall of the abdomen and the defect was closed. Then, a 20 x 15 cm composite patch was placed and it was fixed on the posterior surface of the anterior abdominal wall and the diaphragm. In the postoperative period, the patient had no problem except atelectasis and she was discharged on the 7th day.

**Conclusion:** Morgagni hernia is usually seen in the childhood age group. In adulthood, it is generally asymptomatic except for admission with complications. It can be diagnosed incidentally in imaging techniques performed for different purposes. In cases of incarceration, respiratory symptoms and ileus may be seen according to the organs herniated into the hemithorax. Chest X-ray, direct abdominal x-rays, contrast-enhanced radiographs and CT are usually helpful in the diagnosis. Small intestines, omentum, stomach and colon can be found in the hernia sac. When it is diagnosed, it should be operated for the risk of incarceration. Emergency surgical intervention may be required in patients who develop incarceration. The operation can be performed with thoracic or abdominal approach. In recent years, laparoscopic surgery can also be performed in selected cases.

**Keywords:** Morgagni, abdominal pain, diaphragm hernia

## PP-0354 [Hernia Surgery]

# Risk Factors in the Development of Incisional Hernia

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**Objective:** Incisional hernias are included among the anterior abdominal wall hernias. It is one of the most common problems encountered after surgical procedures performed in the abdomen. Their frequency is reported between 2% and 11%. Incisional hernias that can arise following abdominal surgical interventions can cause significant labor loss, morbidity, and even mortality and affect quality of life negatively. Therefore, we aimed to investigate risk factors in order to prevent the occurrence of incisional hernia.

**Material and Methods:** The data of 128 patients with incisional hernia, who were operated in our clinic between December 2013 and December 2017 were retrospectively analyzed. Parameters such as demographic data of the patients, initial surgical causes, body mass indices, comorbidities, and the development of surgical site infection (SSI) after the first operation were examined.

**Results:** Of the patients, 24.2% (n: 31) were male and 75.8% (n: 97) were female. The initial surgical causes were gastrectomy in 3.9% (n: 5), colectomy in 7% (n: 9), peptic ulcer perforation in 3.9% (n: 5), trauma in 17.2% (n: 22) (liver and spleen injuries), open cholecystectomy in 10.2% (n:13), laparoscopic cholecystectomy (trocar site hernia) in 3.9% (n: 5), and others in 53.9% (n: 69) (gynecologic surgeries, laparotomy due to bride ileus). When the body mass indices (BMI) of the patients were examined, 3.9% (n: 5) were found to have BMI <18, 28.1% (n: 36) had BMI 19-24, 64.1% (n: 82) had BMI 25-80, and 3.9% (n: 5) had BMI of 31 and above. Considering the comorbidities of the patients, the most common one was COPD (active treatment) in 38.3% (n: 49) of the patients and the others were DM in 19.5% (n:25), BPH in 3.9% (n:5), and oncologic causes (patients receiving CT and RT) in 2.3% (n:3). The rate of patients without diagnosed comorbidities was 35.9% (n:46). The presence of surgical site infection (SSI) after the first surgeries was investigated as another factor and SSI was not detected in of 87.5% (n: 112) the patients. On the other hand, SSI was detected in 12.5% (n: 16) patients.

**Conclusion:** There are a number of factors that can lead to incisional hernia development. These include factors such as obesity, pulmonary complications, diabetes, wound site infection, male sex, advanced age, abdominal distention, emergency surgical interventions, postoperative chemotherapy, reuse of old incision, and inadequate or inappropriate surgical technique. In our

study, the vast majority of patients were those with high BMI. In addition, we see that particularly COPD and DM are important diseases as comorbidities and increased intraabdominal pressure and impaired wound healing are risk factors due to their mechanisms. Surgical site infection is also an important risk factor because it disrupts wound healing. In this study, it was observed that incisional hernia developed in 16 patients with SSI despite additional intervention or medical treatment.

**Keywords:** Incisional hernia, risk factor, surgical site infection

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## PP-0355 [Hernia Surgery]

# Uterus in the Inguinal Hernia and Incarceration of Both Ovaries in a Young Adult Patient; Case Report

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**Introduction:** The presence of the uterus in the inguinal hernia sac is a rare condition that occurs frequently in the first years of life as an asymptomatic palpable mass in the inguinal area. This hernia type has uterine tissue. Rarely, ovaries and bladder may be affected. In this case, we shared our experience in inguinal hernia involving the uterus and bilateral ovaries that herniated along the inner groin ring in patient with a history of pelvic pain.

**Case:** A 32-year-old female patient presented with pain in the right groin in the pelvic region and a palpable mass on the labia majora. In the physical examination, the mass extending to the right labia majora was palpated. The patient was a multiparous female patient with central obesity (height: 153 cm and weight: 89 kg. She had a history of previous surgery for left inguinal hernia two years ago but abnormality in the familial history. In the preoperative imaging, strangulated hernia was detected in pelvic MR. Oblique incision was performed from the right groin of the patient who was taken into operation after preoperative preparation. An indirect hernia sac was found with the uterus and both ovarian tissues in it. When malnutrition was not detected in the uterus and ovaries, they were replaced into the abdomen and hernia sac was connected with high ligation. The patient was applied right inguinal hernia repair with graft and the procedure was terminated. The patient who had no problems in the postoperative follow-up and she was discharged on the postoperative 3rd day with healing.

**Conclusion:** The inguinal hernias including the uterus, ovary and fallopian tubes are usually seen in the newborn. They are very rarely encountered in adults. There are 14 cases reported in the literature in healthy adult age group without genetic anomalies. In 15-20% of childhood hernias, the tuba uterina and ovarian structures are included in the inguinal canal, as sliding type hernia. Inguinal hernias including uterus and adnexal structures are typical rare congenital anomalies found in hermaphrodites. Persistent Mullerian duct syndrome is another rare cause, and these patients are male pseudohermaphroditism. Patients are male as phenotype and 46 + XY as karyotype.

Our patient was a women with a history of repeated deliveries and she had no genetic anomaly that was diagnosed. Moreover, there was no evidence of any genetic anomalies in the physical examination of the patient. In this case, abdominal wall and abdominal muscle weakness, which was due to pregnancies and central obesity following the previous graft-free left inguinal hernia repair, might have played a role in the development of inguinal urethral hernia.

In inguinal hernias in adult women, it should be kept in mind that uterus, although rare, ovaries and fallopian tubes may also be present in inguinal hernia sac in the presence of advanced age, history of previous surgery, and multiparity.

**Keywords:** Inguinal hernia, incarceration, uterus

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## PP-0356 [Hernia Surgery]

# Our Results in Complicated Abdominal Wall Repair with Infected, Fistulized and Protruded Biomaterial

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**Objective:** Prosthetic material infection is a rare but important complication in abdominal hernia surgery. The aim of this study is to share our experience in the management of infected, fistulized and protruded prosthetic material after abdominal wall hernia repair.

**Material and Methods:** Patients who developed patch infection after abdominal hernia repair with prosthetic patch between 2008 and 2018 were included in the study. The data of the patients were evaluated retrospectively.

**Results:** Of the patients, 19 were female and 23 were male. The mean age was 55.74 (range, 27-88) years. Twenty-four patients had comorbidities (according to the frequency; diabetes mellitus, asthma, COPD and collagen tissue disease). 15 patients had a history of cancer, 11 patients received chemotherapy and 7 patients received radiotherapy. XX of the patients were smokers. The type of prosthetic material used was polypropylene in 32 patients, polydioxole?? in 3 patients, composite in 7 patients, and biological material in 4 patients. The mean prosthetic material size obtained from the operation notes was 636 cm<sup>2</sup>. More than one type of prosthetic material were used in 4 patients. Intestinal fistula was observed in 10 patients. In 16 patients, growth was detected in wound cultures and also in three of these patients, there was growth also in blood culture. The growing microorganisms according to their frequencies were E. coli, S. aureus, P. aeruginosa and Acinetobacter species. The mean duration of antibiotic use was 13.5 days (range, 2-40 days). The mean duration of hospitalization was 38.4 days. Seven patients died during the perioperative period.

**Conclusion:** Prosthetic material infection after abdominal wall repair is a complication with difficult treatment and high morbidity and mortality.

**Keywords:** Abdominal wall hernias, infected prosthetic material

## PP-0357 [Hernia Surgery]

# A Rare Cause of Ileus with Acute Abdomen and Respiratory Distress: Morgagni Hernia

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**Introduction:** Morgagni hernia occurs as a result of a congenital defect in the retrosternal area. It is the rarest of the diaphragmatic hernias. It is encountered more commonly during adulthood because the congenital weakness in the diaphragm is usually small and the defect grows with increasing age, and hernia develops secondary to the increased intraabdominal pressure. In this study, a Morgagni hernia case admitted with the complaints of acute abdominal picture and respiratory distress and diagnosed late was presented with clinical, laboratory and surgical findings.

**Case:** A 73-year-old woman was admitted to the emergency service with the complaints of abdominal pain intermittently going on for 2 years and bloating in the epigastrium, pain, nausea, vomiting, inability to defecate, and shortness of breath increasing while bending forward, which were existent for 3 days. Morgagni hernia was detected in her examinations. In the physical examination, bowel sounds were detected at the 5th and 6th intercostal level in the right hemithorax during the anterior auscultation and the respiratory sounds were heard deeply. There was mild distention in the abdomen and tenderness and defense in the epigastrium and right upper quadrant. There was no rebound. The bowel sounds were hypoactive. In radiological examinations, the posteroanterior (PA) chest X-ray showed air-fluid levels completely filling the lower part of the right hemithorax and an apparent elevation in the right diaphragm compared to the left diaphragm. The mediastinum and heart were pushed to the left. In the CT examination, it was observed that the transverse colon and the omentum were elevated to the anterior mediastinum from the diaphragmatic defect, the opening of which was measured as 3 cm at the widest point, in the anterior part of the right diaphragm; the heart and large vessels were displaced towards the posterior and left of the middle line due to the compression of hernia sac; and there was an obstruction in the transverse colon because of hernia. The patient was diagnosed with Morgagni hernia radiographically and performed elective surgery. In the exploration, there was an approximately 4 cm defect in the anterior part of the diaphragm, in the retrosternal area on the right side and the 1/3 proximal area of the transverse colon and omentum were incarcerated. The transverse colon and omentum were reduced and resection was not applied because of no ischemia and necrosis. The hernia sac was not excised. The defect in the diaphragm was applied primary repair. There was no complication after operation in the patient. She was discharged on the 4th postoperative day with recovery.

**Conclusion:** In adults, Morgagni hernia is an asymptomatic diaphragmatic hernia unless it is complicated. In symptomatic cases, symptoms range from acute abdomen to acute respiratory distress and they may be related to different systems. In conclusion, we recommend that this rare pathology should be kept in mind in patients admitted with the complaints of acute abdomen, particularly when accompanied by respiratory problems, and the incidentally detected cases should be operated before they become complicated.

**Keywords:** Diaphragm hernia, ileus, morgagni hernia

## PP-0358 [Hernia Surgery]

# A Rare Case; Mesh Reaction Developing after 16 Years

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**Introduction:** Hernias occurring in surgical incision sites are called incisional hernia. The place, shape and closure of the incision are important in the prevention of the development of the incisional hernia. Mesh can be preferred as the closure method in selected cases. Nowadays, synthetic and non-synthetic meshes are available. There are no definite truths about advantages and disadvantages over each other. There are complications associated with the application of mesh. In this case, we will present a mesh reaction that developed after 16 years.

**Case:** A 75-year-old female patient was admitted to the emergency service with the complaint of abdominal pain continuing for 3 days. In addition to abdominal pain, she had nausea-vomiting, and loss of appetite. She had a history of previous surgery for hydatid cyst and incisional hernia approximately 16 years ago. In the physical examination, sensitivity and rebound was detected in the lower right quadrant of the abdomen. In addition, there was an about 7x8 cm well-circumscribed palpable fixed mass at the level of umbilicus. The patient stated that the palpable structure was present for 3-4 months. There was no abnormal value in the laboratory analysis except elevated CRP (85) and white blood cell (15,300). There was no obvious finding in the direct abdominal radiography in standing position. In the ultrasonography (USG), the appendix was 9.5 mm and there was a 5x7 cm mass on the anterior wall of the abdomen. The result of computed tomography (CT) also supported USG. The patient was taken into operation with the pre-diagnosis of acute appendicitis and a mass on the anterior wall of the abdomen. In the laparotomy performed under general anesthesia, once the skin-subcutaneous region was opened, a hard dark-colored foreign body was encountered. It was released considering that it was the mesh placed in the previous surgery. Then, the mesh was opened and an approximately 8x9 cm hard massive lesion with organized surrounding, which was consistent with hematoma, was observed under it. The granulated tissue was excised and the abdomen was entered. The appendix was observed to be hyperemic erectile. Appendectomy was performed. The patient was accepted as a contaminated case and the open wound was not closed, and the operation was terminated. The result of the pathology was consistent with partially organized hematoma and appendicitis. In the postoperative period, the patient was discharged with recovery.

**Conclusion:** Meshes are medical support products used to consolidate related tissues and provide tissue integrity in hernia repair. Nowadays, synthetic and non-synthetic meshes are used. We can also classify meshes as absorbable and nonabsorbable. Complications such as recurrence, seroma formation, infection, pain, fistula development, and mesh reaction are observed depending on the material used for repair. The use of mesh in hernia treatment does not change the rate of wound infection. Deep mesh reaction with late onset is seen in a small number and it is an unexpected complication. In our case, there was no symptom related to mesh and it was detected as a result of analyses performed for simultaneous acute appendicitis. In conclusion, late-stage mesh reaction is a rare condition and the only treatment of this infection is to remove the mesh.

**Keywords:** Appendicitis, incisional hernia, chronic mesh reaction

## PP-0359 [Hernia Surgery]

# Paraovarian Cyst in the Inguinal Hernia Sac: Case Report

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**Introduction:** Inguinal hernias are commonly encountered surgical pathologies and they may require emergency surgical intervention due to incarceration strangulation. In this study, a patient operated in the emergency surgery clinic due to left incarcerated inguinal hernia was presented. A direct inguinal hernia with a fallopian tube in the hernia sac accompanied by paraovarian cyst is a very rare case.

**Case:** A 57-year-old female patient was admitted to the emergency service because of abdominal pain and swelling in the left inguinal region. The patient without nausea and vomiting, with normal gas-stool discharge and with reduced hernia on the left side ongoing for the last 3-4 years presented with the complaint of swelling on the left groin for about 8 hours. In the physical examination, an immobile mass incarceration of about 5 cm in diameter was found in the left inguinal region. In the USG performed for evaluating organ pathologies in the patient whose laboratory parameters were normal, an immobile cystic mass, which did not look like bowel, was detected. Therefore, computed tomography was taken and its result was reported as "A 60x45 mm cystic lesion in the hernia sac in the left inguinal region, uterus and its attachments are deviated anteriorly to the

left. Thus, the herniation of ovarian cyst was also considered in the differential diagnosis ". Because the incarceration and pain of the patient continued for a time longer than 8 hours, an operation was decided. In the exploration, a direct hernia sac with a left fallopian tube inside it, and an about 6 cm paraovarian cyst and small intestine loops were found. The blood supply of the intestine loops were normal, there was no sign of ischemia, it was mobile. The fallopian tube was found to be edematous and hemorrhagic. Approximately 6 cm diametered paraovarian cyst was detected on the left and the left ovary was normal. Upon that, left salpingectomy and paraovarian cyst excision were performed. The posterior wall was then repaired and the repair was completed by laying the mesh. And the operation was terminated. The patient was discharged on the second postoperative day without any complication.

**Conclusion:** The majority of abdominal wall defects are inguinal hernias, with an incidence of 1.9% in females. Of the inguinal hernias seen in women, 67% are indirect hernias, 14% are direct hernias, and approximately 20% are femoral hernias. While the organs that are commonly herniated are the omentum and intestines, and rarely appendix, Meckel diverticulum, bladder, stomach, ovary, fallopian tubes and even uterus can be detected in the hernia sac. The frequency of ovary and fallopian tubes is 2.9%. When the literature is examined, the presence of paraovarian cyst accompanying the fallopian tube is seen only in a few cases. With this very rare case, we would like to emphasize that rare causes should be considered in patients detected to have inguinal hernia.

**Keywords:** Inguinal hernia, direct hernia, incarcerated, fallopian tube, paraovarian cyst

## PP-0360 [Hernia Surgery]

# Clinical Results of Laparoscopic Total Extraperitoneal Herniorrhaphy Treatment in Recurrent Inguinal Hernias

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**Objective:** The lifelong risk rate of inguinal hernia is 27% in men and 3% in women and the recurrence rate of these hernias is reported to be 11% in men and 3% in women. The aim of this study is to demonstrate the clinical outcomes and recurrence rates of the TEP method in the treatment of recurrent inguinal hernias.

**Material and Methods:** In our clinic, TEP herniorrhaphy is performed by using 3 trocar ports (one 10 mm and two 5 mm) and by fixing the anatomically suitable sized mesh with tacker, and skin incisions are closed with 3.0 prolene primary suture.

**Results:** A total of 189 inguinal hernia repairs were performed through TEP method in our clinic. In 76 of them, TEP repair was applied for bilateral inguinal hernia and in 9 of them, for recurrence inguinal hernia. The mean age of recurrent inguinal hernias treated with TEP herniorrhaphy method was 53 years. Of the patients, 5 were operated once, 2 were operated twice, 1 was operated three times, and 1 was operated four times due to inguinal hernia. Right TEP herniorrhaphy was performed in 3 patients, left TEP herniorrhaphy in 3 patients, and bilateral TEP herniorrhaphy in 3 patients. All patients came to the outpatient clinic between the 1st and 13th months.

**Conclusion:** TEP should be preferred particularly in recurrence cases with multiple anterior approach because it has lower recurrence rate and advantages of laparoscopy due to the use of preperitoneal area without tissue damage in these cases.

**Keywords:** Hernia, recurrence, TEP, inguinal

## PP-0361 [Hernia Surgery]

# The First Finding of Ovarian Carcinoma: Sister Mary Joseph's Nodule Mimicking Umbilical Hernia

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**Introduction:** Umbilical metastases are defined as 'Sister Mary Joseph's nodule' (SMJN). Although rarely seen, it generally occurs secondary to gastrointestinal and gynecologic malignancies. In this case, we aimed to present a Sister Mary Joseph's nodule, which was an ovarian carcinoma metastasis mimicking umbilical hernia, and to draw attention to this rarely encountered condition.

**Case:** A 70-year-old female patient presented with a complaint of abdominal pain. In the physical examination, there was an approximately 2x3 cm palpable defect (mass?) in the umbilicus and the umbilicus was in the necrotic appearance. There was no other positive finding. In the laboratory values of the patient, no abnormality was found. The patient was taken into operation due to the pre-diagnosis of umbilical hernia. Following the cleaning of the region under general anesthesia, the skin and subcutaneous

area were passed with smile incision at the 3 cm under the umbilicus and the umbilicus was completely removed. Hernia sac could not be found. In the umbilicus, a partially necrotic tumoral material was observed and completely excised, and it was sent to the department of pathology for evaluation. After the bleeding control, the layers were closed according to the rules and the operation was terminated after dressing. The patient's pathology report was as follows; "Adenocarcinoma metastasis under the skin and as a result of immunohistochemical staining, CK7, PAX8 positive, ER 100% strong positive, PgR 10-20% positive, p53 100% positive. The female genital system, particularly the ovary, should be examined. It suggests high-grade serous carcinoma". Upon this report, the patient was referred to the gynecological oncology unit after discharge. After the elective surgery performed by the gynecological oncology team, the result of pathological evaluation was reported as high-grade serous carcinoma.

**Conclusion:** Metastases localized in the umbilicus are called 'Sister Mary Joseph's nodule' (SMJN). It has been reported in literature that SMJN, which is very rarely seen in gynecological malignancies, generally originates from gastrointestinal and gynecological malignancies. In the literature, some case series on SMJN arising from the tumors of stomach, colon, ovary, pancreas and, more rarely, uterus, cervix, gallbladder, and small bowel have been published. In this case report, we presented a rare case of ovarian carcinoma showing umbilical metastasis, which can mimic umbilical hernia, in order to draw attention to this rare condition and to contribute to our colleagues.

**Keywords:** Ovarian cancer, Sister Mary Joseph's Nodule, umbilical hernia

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## PP-0362 [Hernia Surgery]

# Comparison of Preperitoneal Dissection Techniques in Total Extraperitoneal Endoscopic Hernioplasty

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**Objective:** Inguinal hernioplasty is one of the most common general surgery methods. Recent meta-analyses have shown that patients undergoing endoscopic hernia repair, total extraperitoneal (TEP) or transabdominal preperitoneal (TAPP) can return to their normal lives earlier and with less pain. Besides the advantages of endoscopic hernia surgery, it has weak points such as high cost and longer operation time. The benefit of balloon dissection method used for the creation of the preperitoneal area is controversial as it brings additional burden to the cost. The purpose of this study is to evaluate the results of balloon dissection (Group 1) or direct telescopic dissection (Group 2) of the preperitoneal area in patients undergoing TEP procedure for inguinal hernia repair in terms of intraoperative complications, early outcomes, and long-term pain and recurrence.

**Material and Methods:** Patients undergoing TEP inguinal hernioplasty in our center between January 2011 and January 2017 were retrospectively evaluated. Patients having recurrence and complicated hernias and undergoing coagulopathy were excluded from the study. The demographic characteristics of the patients, surgical findings (duration of operation, complication, conversion to open surgery), early postoperative results (duration of hospital stay, complications, pain level) and recurrence and pain levels in the 1st year were examined.

**Results:** Between the dates mentioned, 138 patients were performed TEP. Eighteen patients whose operations were switched to open technique and whose data could not be reached were excluded from the study. There were 69 patients in Group 1 and 51 patients in Group 2. The demographic characteristics of the patients were statistically similar. The duration of hospitalization was  $1.14 \pm 0.6$  and  $1.1 \pm 0.3$  ( $p=0.506$ ) in Group 1 and Group 2, respectively. Although the duration of surgery was longer in Group 1, no statistically significant difference was found ( $p=0.457$ ). Postoperative pain scores were not significantly different ( $p=0.681$ ). As postoperative complications, superficial hematoma in the port entry site (Group 1 vs Group 2; 8% vs 5.1%,  $p=0.800$ ) and urinary tract infection (Group 1 vs Group 2, 4% vs 2.6%,  $p=0.800$ ) were observed. There was no statistically significant difference in recurrence rates in the postoperative 1st year ( $p=0.129$ ).

**Conclusion:** Since both methods have similar results, it is seen that both methods can be applied safely and easily. The dissection without balloon dissector appears to have similar and effective results with less cost.

**Keywords:** TEP, inguinal hernia, balloon, telescopic dissection

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## PP-0363 [Hernia Surgery]

# A Case Report on Spigelian Hernia as a Rare Type of Ventral Hernia

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**Introduction:** Spigelian hernia (lateral ventral hernia) is a rare type of hernia and constitutes 1-2% of abdominal wall hernias (1). Diagnosis by physical examination is rather difficult. If it is complicated, it may be guiding for diagnosis and its clinical course may be more severe depending on the herniated tissue. Its localization is on the semilunar line forming the external border of the rectus abdominis and extending from the 9<sup>th</sup> costal cartilage to the pubic tubercle, with the rectus muscle in the medial area and internal oblique muscle in the lateral area. In 1645, Adriaan van den Spiegel described the semilunar line for the first time and therefore, this area was called the 'spiegel line' (2). In our case report, we will share our experience on the examination and treatment method of a patient admitted for abdominal pain.

**Case:** A 54-year-old male patient, who was admitted to the emergency unit with right lower quadrant pain that started 1 day before, was referred to the department of general surgery. There was no gas-stool discharge, but complaint of nausea. The patient, who had a 2 cm palpable mass in the right lower quadrant, had previously undergone splenectomy and left inguinal hernia repair. In the ultrasonography of the patient with normal laboratory examinations, there was a 2.5 cm dilated intestinal loop protruding from the 13 cm defect of the anterior abdominal wall in the right inguinal region. The patient was taken into operation. An incarcerated hernia was observed on the spiegel line on the right side of the abdomen. The incarcerated intestinal loop of the patient was taken into the abdomen and the hernia was repaired by using a polypropylene patch. In the postoperative follow-up, the oral intake of the patient was comfortable and he was able to defecate. The patient was discharged on the 5th postoperative day with healing.

**Conclusion:** The exact cause of herniation in the Spiegel line is not fully understood, and there are theories on that it is congenital, acquired, or both (3). The preoperative diagnosis of Spiegel hernia is often difficult because it is rarely encountered and it does not present with characteristic physical examination findings. In ventral hernias, USG is the first imaging modality recommended for diagnosis. In our case, the radiologist evaluated the pathology as strangulated inguinal hernia in USG, which was the first imaging method used in our case, and tomography was not required despite the lack of a definite diagnosis. The final diagnosis was established during the operation. Its treatment is surgical removal of the hernia sac and repair of the defect area. While repair procedure is performed by using synthetic meshes, repair technique with laparoscopic or open technique can also be used with direct suture. In repairs without mesh, high recurrence rates are observed (5). For this reason, it is suggested to repair spiegel hernias with mesh hernioplasty. Since we might need resection in our case, open repair was preferred.

**Keywords:** Incarceration, repair with mesh, spiegel hernia, ventral herni

## PP-0364 [Hernia Surgery]

# Strangulated Inguinoscrotal Bladder Herniation

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**Introduction:** The content of the hernice sac varies depending on the variance of the peritoneal cavity elements. For example, intestinal and colonic lobes, adipose tissue of visceral organs, large omentum, appendix (amyand hernia) and Meckel diverticula. The shift of a portion of the bladder into the inguinal canal is a very rare condition. In this study, a case of scrotal hernia caused by diverticulum to the bladder was presented.

**Case:** A 73-year-old male patient presented with color change in urine, swelling in the right groin, and pain. The right irreducible scrotal hernia and macroscopic hematuria were detected in his examination. There was no evidence of intestinal obstruction. In the scrotal ultrasonography, an anechoic lesion with axial dimension of ~ 65x50 mm continuing with anechoic appearance in the testis in the right inguinal region was notable (dilated bowel loop with liquid content?, cystic lesion?). In the computed tomography of the lower abdomen, it was reported that a large part of the bladder, starting from the right anterior segment, was herniated into the right scrotal sac. The patient was taken into operation. In the operation, the strangulated bladder extending to the scrotum was viewed. The strangulated part was resected and then the classic mesh hernia repair was performed. The patient was discharged on the 2nd postoperative day with a urinary catheter.

**Conclusion:** The herniation of a portion of the bladder into the inguinal canal is encountered at the rate of 3-5% in all inguinal hernias. In general, it is asymptomatic, but it can cause serious complications such as bladder necrosis and obstructive uropathy.

**Keywords:** Strangulation, inguinoscrotal herniation, bladder

## PP-0365 [Hernia Surgery]

# Laparoscopic Incisional Hernia Experience in the First 50 Cases

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We aimed to present our experience of laparoscopic incisional hernia repair in our study. After the first laparoscopic hernia repair was performed in 1993, it was started to be used owing to the short duration of hospitalization and its aesthetic superiority. In this study, 50 laparoscopic incisional hernia cases in SDU Department of General Surgery were retrospectively evaluated. The patients were taken into operation by applying nasogastric and bladder catheter under general anesthesia without bowel preparation. In all patients, GORE dual mesh with adhesion barrier was used. The mesh was fixed with a double-row 5 mm protack by exceeding hernia defect for 4 cm. The follow-up period was 3-48 months in the 50 patients that were evaluated. Postoperative pain scores, complication rates and length of hospital stay were evaluated in the laparoscopic repair group. Wound site complication was 0% in laparoscopic repair group and mortality was not observed. In 5 patients, intestinal injuries occurring during dissection were repaired laparoscopically. The incisional defect was between 3 and 15 cm. the mean age was 52 years and the mean duration of operation was  $67.25 \pm 19.23$  minutes. The mean duration of hospitalization was 1.3 days. Two patients had chronic pain ongoing for 6 months, but pain was not detected at follow-up controls. In one patient, a recurrence due to a mesh tear from a 1 cm defect was detected and it was treated with open repair.

According to the result of our study, even in obese patients and large hernias, laparoscopic incisional hernia repair can safely be performed as a very good alternative to open surgery, when performed in experienced centers, with shorter durations of operation and hospital stay, higher patient satisfaction, and lower complication rates.

**Keywords:** Dual mesh, hernia surgery, laparoscopic incisional hernia repair, ventral hernia

## PP-0366 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Our Experience of Revascularization with Synthetic Tube Graft in Mesenteric Ischemia

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**Objective:** In mesenteric ischemia, which is common particularly in arteriosclerosis patients over 65 years of age, diagnosis is too late, treatment is very difficult and mortality is still very high. In the literature, there are a few published cases of mesenteric ischemia patients treated with open vascular interventions and no consensus has been reached on the number of vessels to be performed reconstruction, graft selection and the preference for antegrade/retrograde applications.

**Material and Methods:** In the present study, we report 5 patients who were performed aorta-superior mesenteric single bypass by using a polytetrafluoroethylene (PTFE) tube graft over a four-year period. Antegrade approach was preferred in 4 patients and retrograde approach in 1 patient. This study did not include patients who were performed bypass with saphenous vein and Y grafts.

**Discussion:** The mean age of the patients, three of whom were female and two were male, was 50,2 years. The main symptoms of the patients presenting with acute/subacute clinical picture were abdominal pain and postprandial nausea and vomiting. All patients had a history of weight loss. The diagnosis was established with digital subtraction angiography (DSA) in 3 cases and with computed tomography (CT) in 2 patients under emergency conditions. The superior mesenteric artery was found to be completely obstructed in three patients and severely obstructed in two patients. Because of the absence of other options in these patients, aorta-superior mesenteric bypass was performed with a 7 mm PTFE graft synthetic tube graft. Three patients with irreversible changes in the intestines, who consulted later, were performed jejunostomy and colostomy following bowel resection. One patient who was taken into the intensive care unit as intubated died from septic shock on the following day. Two of the patients undergoing ostomy died from electrolyte imbalance and multiple organ failure 6 months and 19 months after the operation, respectively. The surgical mortality was 20% and late mortality was 40%. One patient with reversible bowel ischemic findings has been followed up for 3 years and another for 5 years, and their grafts are observed to be open in control DSA examinations.

**Conclusion:** We prefer endovascular interventions as the first choice in patients without severe calcification in mesenteric ischemia and with obstructed short segment. However, in situations where this is not possible and especially in emergency condi-



tions, bypass surgeries with open technique are still life-saving in our desperation. As in our patients, high success rates can be achieved if early intervention can be done when the intestinal ischemia is reversible.

**Keywords:** Bypass, ischemia, mesentery, tube graft

## PP-0367 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] 'Burned-out' Seminomatous Testicular Tumor Presenting as Retroperitoneal Metastasis, Case Report

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The term "burned-out" refers to the testicular tumor that is detected with metastasis to the retroperitoneal, mediastinum, supraclavicular, cervical and axillary lymph nodes and that is completely or partially regressed spontaneously. It is different from primary extragonadal testicular tumors and it is encountered more rarely. In this case report, we planned to present a case with unknown primary, presenting with a mass in the retroperitoneal region and being detected to have a "burned-out" testicular tumor. A 34-year-old male patient was examined at various centers due to a complaint of abdominal pain radiating to his back for 3 months. He had no history of previous operation except for left nephrectomy due to nephrolithiasis at the age of 8 years or any chronic disease. All abdominal CT and PET-CT imagings performed in external centers revealed a 4.4x4.0 cm mass lesion (SUVmax: 19.0) located in the retroperitoneal region in the neighborhood of the right kidney caudal region and closely related to the inferior vena cava and duodenum, and increased 18FDG uptake in the areas consistent with lymph nodes (SUVmax: 18.2) in the paracaval, interaortacaval and right main iliac regions in the abdomen, the largest of which was 1.8cm in diameter at the level of the iliac bifurcation. Diagnostic biopsy under the guidance of interventional radiology was performed for three times in the patient. Because the fine needle aspiration biopsy was consistent with malignancy but tissue diagnosis could not be established, the primary tumor focus could not be detected. Retroperitoneal mass excision, paraaortic and paracaval lymph node dissection were performed in the patient. Microscopic examination of mass excision material revealed a tumoral tissue consisting of atypical cells as solid islets and alveolar structures separating by fibrous septas including lymphocytes. In immunohistochemical analyses, PLAP and CD117 (+), PANCK rare (+), HCG rare (+) and AFP (-) were detected. Lymphovascular invasion and necrosis were not detected in the tumor. Histopathological evaluation was reported as germ cell tumor (seminoma) and (6/10) metastatic lymph nodes. The patient who had no complication in the postoperative follow-up was directed to the urology department with pathology result for follow-up. Right radical orchiectomy was performed by the Department of Urology and chemotherapy was started by the Department of Medical Oncology. Retroperitoneal germ cell tumors should be considered as metastasis of the testicular focus until proven otherwise. Treatment for extragonadal germ cell tumors is systemic chemotherapy. Chemotherapy is highly effective in the treatment of metastatic nonseminomatous germ cell tumors but not in primary testicular tumors due to the blood-testis barrier. Following the effective treatment of extragonadal germ cell tumors, the presence of persistent residual malignant tumor in the testis is well documented with various series. Even in metastatic cases, surgical excision of the primary focus in the testis is recommended. It is recommended to remove the testis even if there is only intratubular germ cell neoplasm in the testis biopsies. As in our case, orchiectomy should be performed before the initiation of chemotherapy in order to provide a full cure. In the literature, it is stated that if the testis is normal in two small series, there is no need to perform surgery. However, these two studies have a few cases. In conclusion, burned-out germ cell tumors should be in our mind in the cases of retroperitoneal mass and the patient should be assessed in detail. For providing a full cure, orchiectomy should be performed in the patient before starting chemotherapy.

**Keywords:** Retroperitoneal mass, paraaortic and paracaval lymph node dissection, burned-out, seminomatous testicular tumor, orchiectomy

## PP-0368 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Are Gastrointestinal Stromal Tumors Really Asymptomatic?

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**Objective:** Gastrointestinal stromal tumors incidentally detected during abdominal surgical interventions or after imaging methods can still cause serious morbidity and mortality. In this study, it was aimed to retrospectively evaluate the files of patients whose histopathological diagnoses were reported as gastrointestinal stromal tumors in our clinic and to investigate the possible symptoms of these patients before diagnosis.

**Material and Methods:** The data of this study were obtained by retrospectively scanning the files of the patients who underwent surgery in the department of general surgery at KSU. Of these patients, those who were hospitalized and operated in the general surgery department between April 2012 and January 2017 and whose histopathological diagnoses were reported as gastrointestinal stromal tumor were included in the study. Data on patients' demographic characteristics including age and gender, preoperative complaints at the time of admission, localization of the tumor at the time of admission, metastasis, local recurrence or mortality were obtained from the ENLIL system of the hospital and/or outpatient clinic recordings, and/or through interview the patients on phone. The records of the patients who died were retrospectively obtained through the electronic ENLIL HBYS system of the patient and national death notification system.

**Discussion:** The mean age of the male patients was  $57.1 \pm 15.2$  years and the mean age of the female patients was  $51.3 \pm 15.3$  years. The most common symptom at admission was abdominal pain with the rate of 46.2% and the others were weight loss, palpable abdominal mass, constipation, incontinence, and lower gastrointestinal system bleeding. Considering the tumor localizations in the patients, the ileum was the most common localization with the rate of 30.8% and the jejunum, intestinal meso and omentum, rectum, peritoneum, stomach, and pancreas were other involvement localizations. In the patients, CD117 positivity was 92.3%, CD34 positivity was 50%, actin positivity was 69.2%, and desmin positivity was 15.4%.

**Conclusion:** Although gastrointestinal stromal tumors are generally known as asymptomatic tumors, they actually manifest symptoms in every patient. However, as these symptoms are seen in many diseases, they are often ignored and the tumor is not recognized and incidentally detected by patients or physicians. The prognosis is generally good for tumors in the low-risk group. This tumor is unresectable especially in the moderate and high-risk groups or it can present with metastases in advanced stages.

**Keywords:** Gastrointestinal stromal tumor, imatinib, prognostic criteria

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## PP-0369 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Evaluation of Diagnosis and Treatment of Midgut Volvulus in an Adult Patient in the Light of Literature: Case Report

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Congenital midgut malrotation is a complex gastrointestinal anomaly that can cause midgut volvulus and gastrointestinal obstruction. While it often presents with symptoms in childhood, it may rarely become symptomatic in adulthood. In our case, a 32-year-old female patient consulted to our outpatient clinic due to the complaint of vomiting ongoing for 3 months. Midgut volvulus was diagnosed with abdominal tomography and Ladd's procedure was performed. She was discharged on the postoperative 5th day. Midgut volvulus is a rotation anomaly of the middle intestine in intrauterine life. It results from the clockwise torsion of the middle intestine mesentery on the superior mesenteric artery axis. Adult patients may present with chronic unexplained abdominal discomfort, vomiting, abdominal pain increasing after meals or acute abdominal pain. These findings occur due to Ladd bands and volvulus, which cause acute or chronic intestinal obstructions. The diagnosis can be established with changes in the localization of the mesenteric vascular structures in the Doppler ultrasonography and with the swirl view of the mesenteric tissues in the abdominal tomography. During surgery, after the dissection of the Ladd bands, described as Ladd's procedure, and the detorsion of the torsioned loops, the cecum is localized in the left lower quadrant and the small intestines are placed in the right lower quadrant. Although midgut volvulus often presents with symptoms in childhood, it may rarely become asymptomatic until adulthood. It should be kept in mind as an uncommon pathology in patients evaluated in emergency or outpatient clinic conditions and the Ladd's procedure, which is used for the treatment, should be known by general surgeons.

**Keywords:** Adult, ladd's procedure, midgut volvulus

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## PP-0370 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Small Bowel Perforation Due to a Foreign Body

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**Introduction:** Foreign bodies may rarely lead to intestinal perforation, intestinal obstruction and peritonitis. In the literature, 80% of the foreign bodies taken orally are reported to be defecated by completing the digestive system without causing any complication or morbidity. Although they are usually seen in children, they can be encountered in alcoholic and mentally handicapped individuals, or elderly patients with dental prosthesis and needy individuals. The most frequently swallowed foreign

bodies are the materials such as fish bones, bone fragments, or pins. In this study, two cases admitted to the emergency unit with intestinal perforation due to foreign body were presented.

**Case 1:** A 78-year-old female patient with known histories of DM, HT, and CAD was admitted to the emergency unit with the complaints of diffuse abdominal pain, nausea and vomiting going on for two days. There was widespread tenderness, defense and rebound in the abdomen in the physical examination. There was no significant pathology except leucocytosis in the laboratory tests. The abdominal computed tomography images showed an appearance consistent with foreign body in the lumen at the small intestine level and millimetric free air densities around the intestine. The patient was taken to the emergency operation with these findings. In the operation, the foreign body (chicken bone) causing perforation in two localizations in the jejunum at about 80cm from the treitz ligament was observed. Segmental small bowel resection and end-to-end anastomosis were performed to cover the perforation areas. The patient was followed up postoperatively. The patient, who did not develop any complication during the follow-up and tolerated oral intake, was discharged on the 6th postoperative day by healing.

**Case 2:** A 34-year-old female patient with mental retardation was admitted to the emergency unit with the complaints of nausea, vomiting, and abdominal pain continuing for 3 days. In the physical examination, there was extensive tenderness, defense and rebound in the abdomen. Leukocytosis was found in the laboratory analysis. The patient was performed abdominal computed tomography based on these findings. The tomography images revealed an appearance consistent with the foreign body causing obstruction in the small intestine loops and diffuse intraabdominal free fluid. The patient was taken to emergency operation with these findings. In operation, it was seen that there was full-layer perforation area at 90 cm from the treitz in the small intestine loop and complete obstruction of the lumen due to the foreign body (plastic material) in the small intestine at the 110 cm from the treitz. The 30 cm small intestine segment between the 90th and 110th centimeters was resected and end-to-end anastomosis was performed. The patient was postoperatively followed up in the clinic. The patient, who did not develop any complication during the follow-up and tolerated oral intake, was discharged on the 4th postoperative day with healing.

**Conclusion:** Although gastrointestinal complications associated with foreign bodies are not common in adults, they should be included among the prediagnoses that should be remembered especially in elderly, needy or mentally retarded patients admitted to the emergency unit. In suspected cases, the sensitivity of tomography in diagnosis is very high. Enterotomy, primary repair and resection anastomosis in the presence of more than one perforation are the treatment methods that are preferred.

**Keywords:** Foreign body, small intestine, perforation

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## PP-0371 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Crohn's Disease Presenting with Gastroduodenal Region Involvement: A Case Report

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**Introduction:** Crohn's disease is one of the two major chronic idiopathic inflammatory diseases of the gastrointestinal system. This disease can involve all parts of the gastrointestinal system, from the oral mucosa to the anus. While it especially affects the terminal ileum and proximal colon, gastroduodenal involvement can also be seen rarely (0.5-4%). In this study, a patient diagnosed with Crohn's disease in the duodenum and the treatment plan was shared as a case report.

**Case:** A 24-year-old male patient was admitted to our clinic with the complaints of bloating, epigastric pain, nausea and vomiting existing for about a year. The patient had no history of any pathology except for peptic ulcer developing on the ground of H. pylori. There was no finding except epigastric tenderness in the abdomen in his physical examination. Perianal examination revealed two external fistula orifices. His vital signs at the time of admission were within normal intervals. Pylorus and an apparent narrowness in the first part of the duodenum were detected in the endoscopy. In the esophagus-stomach-duodenum radiography, it was observed that the opaque material passed into the duodenum in a small quantity and slowly. The thoraco-abdomino-pelvic computed tomography showed diffuse wall thickening in the 1st and 2nd parts of the duodenum, and multiple abscesses in the sizes of 1-1.5 cm around the first part. In addition, several fistula tracts were observed in the anal canal. The present findings and investigations were evaluated to be consistent with Crohn's disease and the Whipple procedure was applied to the patient. In the histopathological examination of the specimen, changes showing Crohn's disease (full-thickness wall involvement, focal abscess formations in the intestinal wall, etc.) were detected in the duodenum. The patient Medical treatment for Crohn's disease was planned for the patient considering the recommendations of the gastroenterology department and he was discharged with healing on the 9th postoperative day.

**Conclusion:** Crohn's disease affects the gastroduodenal region of the intestinal system at the rate of 0.5-4%. In approximately 1/3 of these patients, involvement of the terminal ileum and colon can occur at the advanced stage despite the absence of small intestine and colon involvement at the time of diagnosis. Neighbor organ involvement is a common picture and involvement of the antrum, pylorus and proximal duodenum is observed in approximately 60% of patients. Gastroduodenal Crohn's disease is seen equally in men and women. Approximately 75% of the cases are encountered in the 3rd and 4th decades. Endoscopic

biopsy is the gold standard for diagnosis and the esophagus-stomach-duodenum passage radiography is an important test, especially in the presence of stricture. Proton pump inhibitors and steroid treatment significantly reduce the symptoms in cases without complication in the treatment. Although conservative treatment modalities such as balloon dilatation and stenting seem to be the most appropriate therapeutic approaches, surgical treatment (stricturoplasty, gastrojejunostomy and gastroduodenectomy) is inevitable in some patients. In the treatment of the presented case, the Whipple procedure was preferred due to the presence of widespread involvement beginning from the pylorus and advanced stricture and also by considering the patient's being young and having no comorbidities. Today, the optimal approach to Crohn's disease with gastroduodenal involvement is conservative medical treatment. However, patient-based evaluation should always be performed and surgical options should be kept in mind in some patients.

**Keywords:** Surgical treatment, Crohn's disease, duodenum, stomach, stricture

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## PP-0373 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Coexistence of Adenocarcinoma, Gastrointestinal Stromal Tumor and Schwannoma in the Stomach, A Rare Case Report

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Adenocarcinoma is the most common histologic type of gastric tumors. Gastric schwannoma is a fusiform-cell mesenchymal submucosal tumor. It most commonly localizes in the stomach in the gastrointestinal system and represents 02% of all gastric tumors. Gastrointestinal stromal tumor constitutes 1% of all gastrointestinal system malignancies and 60-70% of them are located in the stomach. The coexistence of three synchronous tumors of different histological types is quite rare. Our case was a 70-year-old male patient. The gastroscopy performed due to epigastric pain and weight loss revealed ulcerated lesion extending to the cardia in the small curvature.

The result of biopsy was reported as adenocarcinoma. The patient was performed total gastrectomy-Roux-en-y gastrojejunostomy. In the pathologic examination, it was reported that a synchronous 1cm diameter GIST and a 3.5cm diameter schwannoma were detected in addition to the known adenocarcinoma. We aimed to present the coexistence of synchronous adenocarcinoma, schwannoma and gastrointestinal stromal tumor, which is a rarely encountered condition.

**Keywords:** Gastric adenocarcinoma, schwannoma, gastrointestinal stromal tumor

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## PP-0374 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Malignant Solitary Fibrous Tumor in the Pelvic Area with Hypoglycemia: Doege-Potter Syndrome

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Solitary fibrous tumors (SFTs) are rarely seen spindle cell neoplasms and they are mostly benign. While SFT has been considered to originate only from the pleura previously, it has been shown that it also originates from various anatomical regions. Pelvic SFT is a rare but its malignant form is rarer. And, it is very difficult to diagnose it histopathologically. The clinical course of SFT with hypoglycemia is defined as Doege-Potter Syndrome. A 47-year-old male patient, who was operated in an external center for GIST and detected to have recurrent mass in the pelvic region in the follow-up, was referred to our clinic. The patient with type 2 DM had hypoglycemic attacks for the last 6 months and did not use antidiabetic drugs. In the blood tests performed to investigate the cause of hypoglycemia, the levels of growth hormone (GH) and IGF-1 were low and the levels of cortisol and insulin were normal. The computerized tomography revealed a 47x37mm mass in the left jejunal loops and multiple heterogenous solid masses, the largest of which was 67x60 mm, involving the common

iliac vein of 156x129 mm, having an about 180 degree contact with the external iliac artery and being in the anterior area of the vertebrae at this level, along the iliac chain and in the right perirectal area. In the magnetic resonance imaging, it was reported that the mass was mildly hyperintense in T1A images and apparently hyperintense in T2A images and intense pathological contrast enhancement was observed following the IVGd injection. In the angio-CT, mass at the level of bifurcation and fatty planes between the VCI and right common iliac vein could not be selected (invasion?). The patient was operated based on these evaluations. In the operation, the left common iliac vein was resected with mass due to right internal iliac artery invasion and cytoreductive surgery was performed. In the histopathological examination, the surface of section was dirty yellow and a 23x20x13cm mass with local bleeding and necrotic appearance was evaluated. Microscopic examination of the mass revealed oval round nucleated pleomorphic cells with narrow cytoplasm, 7 mitoses in x10HPF, and local necrosis and bleeding areas. Vimentin, CD34, Bcl-2, and CD99 stainings were positive in immunohistochemical evaluation. In the light of these findings, the mass was pathologically diagnosed as malignant solitary fibrous tumor. Considering the blood tests performed for hypoglycemia and the improvement of hypoglycemia in the early postoperative period, it was decided that the patient had Doege-Potter Syndrome. In the early postoperative period, the patient was initiated antidiabetics due to high blood glucose levels. The patient was coumadinized for 3 months and then switched to LMWH. The patient was followed up for 8 months without the occurrence of hypoglycemia attack.

**Keywords:** Doege-Potter syndrome, hypoglycemia, cytoreduction, solitary fibrous tumor

## PP-0375 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Jejunal Diverticulosis Complicated with Perforation; A Rare Etiology of Acute Abdomen

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**Introduction:** Jejunal diverticulosis is a rare pathology with an incidence of 0.5-1% (1). The increased pressure in the small intestine lumen and the weakening of the wall are accused for the etiology (2). While most cases are asymptomatic, 30-40% of cases may become complicatedly symptomatic as chronic abdominal pain, malabsorption, hemorrhage, diverticulitis, obstruction, abscess formation, and rarely diverticular perforation (2-4). In this study, we aimed to present the rarely seen case of jejunal diverticulosis and diverticular perforation with the literature.

**Case:** A 36-year-old female patient was admitted to the emergency unit with the complaints of diffuse abdominal pain, nausea and vomiting. In the physical examination, she had diffuse defense, rebound and tenderness in all quadrants. The body temperature of the patient was 37,6°C, pulse was 114/min, BP was 110/80 mmHg, and WBC was 15,3. The computed tomography revealed clear free air around the liver, free fluid consistent with the intense collection, and edema in the mesentery. The patient was operated under emergency conditions. Eight diverticula, one of which had perforation, were observed on the mesenteric surface in the jejunum segment between the 50th and 90th cm from the Treitz ligament and there was intraabdominal bilious purulent fluid. Segmentary small bowel resection, side-to-side anastomosis, and intraabdominal irrigation were performed. The patient was discharged on the 7th postoperative day with recovery. In the pathology of the specimen, eight diverticula, the largest of which was 8 x 7 cm and the smallest was 4 x 3 cm, were detected and one diverticulum had a 4 mm perforation area. It was found that the diverticula were pseudodiverticular lesions including herniation of the mucosa and submucosa.

**Conclusion:** Acquired jejunoileal diverticulosis was first described by Sommering in 1794 as the herniation of the mucosa and the submucosa of the mesenteric side of the small bowel wall along the muscular layer (pseudodiverticulum). It is more commonly seen in advanced ages.1-5

Uncomplicated cases are usually asymptomatic. It may show symptoms such as nausea, vomiting, epigastric and periumbilical abdominal pain. Complications such as diverticulitis, bleeding, intestinal obstruction and perforation occur in 30% of patients with jejunal diverticulosis.2-6. Lobo et al. defined the most common complication requiring surgery as perforation in small bowel diverticulosis.6 The CT imaging is the best method for diagnosing complicated jejunal diverticulosis.7 Most of the complications of jejunoileal diverticulosis require surgical treatment. In the surgical treatment, simple diverticulum excision should not be performed due to the risks of postoperative intestinal leakage, sepsis and death.2-7 In the differential diagnosis of jejunal diverticulosis perforation, Crohn's disease, small intestine neoplasm, foreign body trauma, and colon diverticulitis perforation should be considered.8 Jejunoileal diverticulosis is a rarely encountered disease that usually presents as asymptomatic or with non-specific findings and has life-threatening complications such as perforation, obstruction and bleeding. It should be considered in the etiology of acute abdomen.

**Keywords:** Jejunum, diverticulum, perforation

## PP-0376 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Gastric Cancer in Pregnancy: Case Report

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Gastric cancer is seen in 0.025-0.1% of all pregnancies. As gastric cancer symptoms are often overlooked during pregnancy, most cases are diagnosed in advanced stages. In our study, neoadjuvant chemotherapy (CT) was started in a 35-year-old female patient diagnosed with stage-3 diffuse infiltrative gastric adenocarcinoma. CT was terminated because of the development of subdural hematoma in the left temporoparietal region and the related paraparesis after the 2nd session. The patient, who did not come to the hospital for follow-up controls, consulted to our hospital due to epigastric tenderness and abdominal pain 4 months later. In the examinations, it was determined that the patient was 11 weeks pregnant. In the thoracoabdominal MR, diffuse wall thickness of 14 mm along the large curvature at the level of stomach corpus - fundus and appearance of early pregnancy were observed and there was no pathology in other regions. The brain MR showed a lesion consistent with a 4x2 cm chronic hematoma in the left temporal region. No pathology was detected in the neurological examination. As a result of the evaluation in the oncology council, it was decided to operate the patient in the 2nd trimester. In the 14th week of pregnancy, the patient was performed total gastrectomy + D2 lymph node dissection + Roux en Y esophagojejunostomy. The tumor stage was determined as T4aN3M0 (Stage 3C) according to the AJCC 7th edition. The patient, who had no problem in the postoperative follow-ups, was discharged on the 10th postoperative day. After four sessions of adjuvant CT that was started one month after the discharge, she gave birth to a healthy male baby weighing 2260 grams by cesarean section at 35th week. She received 2 cycles of CR after the caesarean section. Since May 2015, the patient has been followed up for 32 months without treatment. There was no sign of recurrence in the follow-ups. During the 32-month follow-up period, the baby is also healthy. Although gastric cancer occurring with pregnancy is rare, it requires a multidisciplinary approach (medical oncology, general surgery, gynecology and obstetrics). The treatment decision should be made according to the clinical stage and the gestational age at the time of diagnosis. While spontaneous abortion, fetal death, and major malformations are seen due to CT given at the first trimester, it has been demonstrated that CT at the 2nd trimester does not increase the incidence of malformation compared to normal pregnancy. There is no standard CT regimen to be given during pregnancy.

**Keywords:** Pregnancy, gastric cancer, prognosis

## PP-0377 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Pelvic Peritoneal Defect as a Rare Cause of Small Bowel Obstruction

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**Introduction:** Internal herniation is one of the rare causes of small bowel obstructions (SBO). Approximately 6-7% of the SBOs occur due to internal herniation. Of them, 1-2% develop secondary to pelvic peritoneal defects. Internal herniations may be due to congenital intraabdominal defects or may be seen secondary to previous abdominal procedures. In this study, it was aimed to present a rare case of internal hernia secondary to the Douglas pouch peritoneal defect.

**Case:** A 27-year-old female patient presented with colic abdominal pain, intermittent nausea and vomiting to the emergency department. The patient had no history of a comorbidity and previous surgery. She had history of delivery and prolonged labor 2 years ago. In her physical examination, tenderness in the suprapubic area was detected. There was no finding of acute abdomen. In the laboratory analysis, there was no pathological finding except the white blood cell value of 15000/dl. In the direct abdominal radiography in standing position, air-fluid levels at the level of the small intestine were observed. The CT of the abdomen revealed air fluid levels in the ileal and jejunal segments beginning from the pelvic region. No obstructive lesion was detected. The patient was hospitalized and followed up with nasogastric decompression. On the 4th day of her follow-up, colonoscopy was performed and its result was reported as normal. The exploratory laparotomy was performed in the patient who underwent nasogastric drainage and had air fluid levels in the direct abdominal radiography. At the exploration, an approximately 1.5 cm peritoneal defect was found in the Douglas pouch and ileal segments herniated from this region were detected. There was no circulatory disorder in the ileal segments. Intestinal segments were taken into the abdomen and the defect was repaired. On the 4th day following the operation, the patient, whose oral intake returned to normal and who had defecation, was discharged.

**Conclusion:** Small bowel obstruction due to internal herniation is a rare cause of ileus. Of internal herniations, approximately 53% are paraduodenal, 13% are pericecal, 8% are in the foramen Winslow area, 8% are transmesenteric or transmesocolic, and 6% are intersigmoid. As detected in our case, internal herniations associated with pelvic peritoneal defects are reported very rarely. The case recalls that internal herniations should also be kept in mind as the possible clinical causes of ileus.

**Keywords:** Defect, herniation, internal, pelvic, peritoneal

## PP-0378 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Gallstone Ileus: A Rare Cause of Ileus

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**Introduction:** Gallstone ileus is a complication of gallbladder stone and it usually occurs through bilioenteric fistula resulting from repeating attacks of acute cholecystitis. It was first described by Bartholin in 1654. It is more common in advanced ages and in women. Gallstone can be seen in the terminal ileum at the rate of 64%, in the proximal ileum and jejunum at the rate of 23%, in the colon at the rate of 4%, and in the stomach at the rate of 1%. It is seen in 0.3-0.5% of cholelithiasis cases. With advanced age, comorbid diseases, and delayed diagnosis, it has a mortal course with a rate of 15%. Although 30-40% can be preoperatively diagnosed through radiological techniques, diagnosis is often established intraoperatively.

**Case:** A 68-year-old female patient was hospitalized to our clinic because of abdominal pain, nausea, vomiting, and inability to defecate. She had a history of diabetes mellitus and cholelithiasis. The computerized tomography revealed the picture of ileus and cholecystoduodenal fistula tract. The biochemical parameters of the patient were normal except the WBC value of 13000. The patient was taken into the emergency surgery because of the presence of tenderness and defense in all quadrants and also distention. In the exploration, a gallstone obstructing the jejunum lumen at 30 cm distal of the Treitz ligament. The jejunum lumen was opened and the stone was taken out. Primary repair was performed on the intestinal wall. It was observed that the gallbladder was adhered to the duodenum. Cholecystectomy was started as antegrade and it was seen that the gallbladder was fistulized to the duodenum from the Hartmann region. It was separated and then the duodenum was applied primary repair, and the cholecystectomy was completed. On the fifth postoperative day, the patient was drunk methylene blue for control and she was initiated oral intake. She was discharged without any problem on the 7th day.

**Conclusion:** Gallstone ileus occurs when gallstones pass through the intestinal system and cause obstruction due to the fistula that develops between the gallbladder or biliary tract and the duodenum, stomach and colon. Among these fistulas, mostly cholecystoduodenal fistulas are seen. Mechanical obstructions due to gallstones constitute approximately 1-4% of all intestinal obstructions. Ultrasonography and computed tomography can be used for differential diagnosis. If the gallstone ileus is suspected primarily, contrast-enhanced examinations can be benefited. Because the findings are nonspecific in gallstone ileus, the definite diagnosis is often established during the operation. Obstruction is most often observed in the terminal ileum. In our case, the hospitalization of the patient for the history of cholelithiasis and ileus was very helpful in reaching the final preoperative diagnosis after examinations and advanced imaging techniques and entering the operation with a specific diagnosis. Although gallstone ileus is a rare cause of mechanical obstruction, it should be kept in mind in patients without a history of previous abdominal surgery, particularly in advanced aged women, because of its high mortality and morbidity rates. Gallbladder pathologies should definitely be questioned in the anamnesis of ileus patients. In patients with advanced age and comorbid diseases, the removal of stone with enterotomy and cholecystectomy can be considered as adequate as in our case.

**Keywords:** Ileus, cholecystoduodenal fistula, gallstone

## PP-0379 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Can Negative Pressure Therapy Replace with Ileostomy?

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**Introduction:** Open Abdomen Negative Pressure Therapy System (OANPTS) is a technique that is increasingly used in a wide variety of clinical situations including abdominal compartment syndrome, damage control laparotomy, and treatment and prevention of severe intraabdominal sepsis. The purpose of temporary abdominal closure is to protect internal organs, to prevent the adhesion of the organs to the abdominal wall, to remove the fluid in the abdomen, and to prevent fascial retraction. OANPTS has shown that it can be useful as a temporary closure method.

**Case:** A 71-year-old woman, who had a history of right hemicolectomy 20 years ago was admitted to the emergency department with the complaints of abdominal pain and inability to defecate. The physical examination revealed tenderness in the abdomen and defense in the right lower quadrant. In the blood analysis, white blood cell count was 20.000/mm<sup>3</sup>, hemoglobin was 13.8 g/dl, CRP was 56.7 mg/dl, and electrolytes were normal. In the abdominal tomography, the image was consistent with torsion in the small intestine segment. Laparotomy was performed under general anesthesia. In the exploration, the inside of the abdomen was contaminated. An approximately 20 cm necrotic area starting from the 5 cm proximal of the ileo-transverse anastomosis line and extending towards the ileum was observed. This area was resected. The abdomen was washed with about 3000 cc of liquid. Then, instead of opening the loop ileostomy, the patient was performed ileo-transverse anastomosis and ABTHERA negative pressure treatment was applied. Broad spectrum antibiotic therapy was started. The patient was followed up for three days. Then, re-exploration was performed and the anastomosis line was checked. No pathology was found in the abdomen. The anastomosis line was normal. One bag drain was placed and the abdomen was closed. The oral intake of the patient was started on the fifth postoperative day and the treatment was completed with antibiotherapy.

**Conclusion:** In addition to the benefit of follow-up of patients with open abdomen, it may cause an increase in mortality and morbidity. Once the causes of open abdomen are eliminated, the fascia must be closed as soon as possible to prevent complications such as fistula, fluid and protein, and loss of heat and electrolyte. Failure in closing the fascia may cause ventral hernia, which leads to significant morbidity and mortality. OANPTS prevents the internal organs to adhere the abdominal wall and it effectively removes the fluid in the abdominal cavity. Thus, it facilitates the mobilization of the fascia and plays an active role in the closure of the fascia. In our case, we performed OANPTS in the patient instead of opening temporary ileostomy after performing anastomosis and washing the abdomen. In this way, we removed the fluid in the abdomen and avoided re-opening the abdomen and performing anastomosis. This gave us the opportunity to control the anastomosis line in the abdominal re-exploration and to intervene when necessary. However, there was no pathology in the anastomosis line. Then, the abdomen was closed. It should be kept in mind that negative pressure treatment can be used instead of opening ostomy in cases requiring ileostomy due to abdominal infection.

**Keywords:** Ileostomy, negative pressure treatment, torsion

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## PP-0380 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Our Experience of Laparoscopic Gastrectomy in Our Clinic in the Last Two Years

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In this study, the demographic data, durations of surgery, pathological reports, stages, and complications of 76 patients who were performed laparoscopic gastrectomy due to gastric adenocarcinoma in the Department of Surgical Oncology at Ankara University between the years of 2015 and 2017 were presented.

**Keywords:** Gastric adenocarcinoma, laparoscopy, gastrectomy

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## PP-0381 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Case of Ileus Due to Meckel's Diverticulum Torsion

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**Introduction:** Meckel's diverticulum (MD) is an embryological remnant resulting from the incomplete obliteration of the omphalomesenteric canal and it is the most common congenital anomaly of the gastrointestinal system. Of the patients, 3.7- 6.42% are symptomatic. These symptoms are nonspecific symptoms such as nausea, vomiting and abdominal pain. In this article, a case of ileus developing due to rarely seen torsion of Meckel's diverticulum in adult patient was presented.

**Case:** A 84-year-old male patient was admitted to the emergency service with abdominal pain, inability to defecate for two days, and vomiting. She had abdominal distention, diffuse tenderness and defense. He was hypotensive and tachycardic. In the blood analyses, white blood cell count was 12600/mm<sup>3</sup> (lymphocyte 4,8%, neutrophile 87%), hemoglobin was 11,5 g/dl, CK was 568,5 U/L, CK-MB was 25,9 U/L, glucose was 160 mg/dl, total bilirubin was 2,57 mg/dl, direct bilirubin was 0,8 mg/dl, indirect bilirubin was 1,720 mg/dl, ALT was 15 U/L, AST was 57 U/L, ALP was 120 U/L, creatinin was 1,09 mg/dl, CRP was 9,70 mg/dl, and electrolytes were normal. In the direct abdominal X-ray in standing position, dilated small intestine segments and air fluid levels were observed, but there was no free air. The abdominal tomography revealed diffuse fluid in the abdomen, free air in the rectum, an



increase in calibration in the iliojejunal loops, and air-fluid levels. The patient was hospitalized with the pre-diagnoses of acute abdomen and intestinal obstruction. Fluid replacement was started by inserting a nasogastric catheter. Because there was no change in his findings, he was taken to the operation. When the abdomen was entered under general anesthesia, diffuse distension was observed in the small intestine and the entire abdomen was explored. The torsion of the meckel diverticulum was observed at the 120 cm proximal to the ileocecal valve. While there was diffuse distention in the segments of the diverticulum proximal, the segments in the distal area were normal. The torsion was corrected. Once vascularization of the ischemic bowel loops and peristaltic motion were seen, resection was not performed. The inside of the abdomen was washed with 1000 cc fluid and a drain was placed. The patient was discharged on the ninth postoperative day with recovery.

**Conclusion:** The majority of patients with Meckel's diverticulum are asymptomatic. It is usually detected incidentally during surgical interventions performed for another reason or due to its complications. The complications of MD are bleeding, intestinal obstruction and diverticulitis. It occurs most frequently with obstruction and hemorrhage clinic in the adulthood and is often silent. The main mechanisms for MD, which can cause bowel obstruction, are volvulus, Littre's hernia, intussusception, mesodiverticular band, stenosis secondary to diverticulitis, and Meckel's diverticulum lithiasis. Torsion of MD is a rare complication of diverticulum, which present with the signs of obstruction and infection. Several cases have been reported in the literature. Our patient had one of these rare complications and he was performed emergency surgery. In the literature, segmental resection is recommended for such cases. However, in our case, the resection was abandoned because vascularization of the intestines was provided and the patient was discharged with improved condition. Meckel's diverticulum should be considered in the differential diagnosis of patients with acute abdomen signs with small bowel obstruction.

**Keywords:** Meckel's Diverticulum, ileus, torsion

## PP-0382 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Complications of Nissen and Redo Nissen Operations and Their Management

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**Objective:** Laparoscopic Nissen fundoplication surgery is the gold standard surgical method in cases of gastroesophageal reflux and hiatal hernia. Although laparoscopic antireflux surgery (LARS) is usually a safe procedure, serious and complicated complications can occur especially in recurrent cases.

**Material and Methods:** We retrospectively evaluated the early and late complications and their management after LARS operations performed in our clinic in 2017.

**Results:** Four of the 40 patients who underwent LARS (10%) developed early complications and 6 (15%) developed late complications. Postoperative ileus occurred in two patients (5%) as an early complication and their complaints were regressed with medical treatment and follow-up. One patient was hospitalized in the intensive care unit because of pulmonary complaints and decreased oxygen saturation on the first postoperative day. The complaints of the patients with atelectasis were regressed after 36 hours and they were discharged with recovery. One patient who underwent LARS for hiatal hernia 4 years ago was operated due to the diagnosis of recurrent gross hiatal hernia. After the redo Nissen operation, a possible esophageal leak was detected in the test performed with methylene blue on the postoperative 3rd day. Central venous catheterization was performed on the postoperative 4th day. TPN was initiated and supportive treatment was given for one week. However, although the content of the drain was around 40-50 cc per day, it was observed that the leak continued in the methylene test performed on the 12th day. In our clinic, 2-3 trials were performed to insert the feeding tube extending the jejunum by endoscopy, but in all of them, the feeding tube was returned to the stomach. On the 16th day, with the help of an experienced endoscopist, a feeding tube was placed to extend to the distal part of Treitz with consultation with the Department of Gastroenterology. The patient was fed with feeding tube until the postoperative 30th day. Because there was no leakage in the methylene test performed on the 30th day, oral intake of patient was started. In the barium graph taken due to the complaints of dysphagia and vomiting in the second month, stenosis was observed in the esophagogastric junction. The department of gastroenterology was consulted for balloon dilatation. It was observed in the endoscopy that balloon dilatation was not needed, but 3-4 linear notches were formed in the mucosa due to the reactional strictural appearance. The patient recovered rapidly after this procedure and normal diet was started in the postoperative 3rd month. Four patients (10%) had bloating and dyspepsia as late complications. The endoscopy revealed alkaline reflux gastritis in 3 patients and antral gastritis in the remaining one patient. In one patient who presented with dysphagia, there was no evidence of narrowing in the esophagogastric junction in the barium radiography. In one patient who complained of burning retrosternal, the endoscopy showed evidence of alkaline reflux gastritis. Medical treatment was planned for all of these patients and their complaints were significantly regressed.

**Conclusion:** Although LARS is defined as safe, the necessity of intervention and multidisciplinary approach by experienced surgeons is inevitable in coping with complications especially in recurrent cases.

**Keywords:** Gastroesophageal reflux, hiatal hernia, nissen fundoplication, complication

## PP-0383 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] GIST Originating from the Jejunum and Causing Metastasis to the Rectum and Left Axilla

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**Introduction:** Gastrointestinal stromal tumors (GIST) constitute less than 1% of gastrointestinal tumors. They are the most common mesenchymal neoplasm of the gastrointestinal system. GISTs are usually found in the stomach or small intestine, but it may occur at any region along the gastrointestinal (GI) tract. They may rarely have extra GI involvement. Clinically, abdominal pain, ileus, jaundice and peritonitis can be seen. Tomography, usg, mr, endoscopy and eus are used for diagnosis. The definite diagnosis is established through biopsy. Its primary treatment is surgery. Tumor size and mitotic activity are the determinants of prognosis. These tumors can cause metastasis to the liver, GI and peritoneum. Metastases other than these are very rare. Treatment should be continued with chemotherapy (CT) in order to prevent recurrence and metastasis. In this case, a case of metastatic GIST undergoing radical surgery was presented.

**Case:** In the examination of the patient, who was admitted to the emergency service because of abdominal pain, there was no acute abdomen. A mass was palpated in the midline and left axilla of the abdomen. A mass was detected on the rectal examination of the patient who was suffering from constipation. Because the result of FNAB performed by the department of urology was reported as "Gastrointestinal Stromal Tumor", the patient was referred to our department. The patient underwent colonoscopy. Its result was evaluated as "external compression with restricted expansion in the distal part of the rectum and at the level of sigmoid colon? The mucosa is normal". Abdominal CT of the patient was reported as, "There is a solid mass lesion of approximately 10 cm in diameter with large necrosis areas, filling the area between the rectum and the bladder, considered to originate from the anterior wall of the rectum. The prostate gland and seminal vesicles cannot be separated from the mass. There is a second mass lesion about 7 cm in diameter which is thought to originate from the ileum at the midline and on the right of the pelvis entry. The patient was operated. In the exploration, a 15\*15 cm GIST originating from the jejunum and involving the appendix was found at the distance of 200 cm from the ileocecal valve. Jejunum resection and anastomosis were performed by involving the tumor and the appendix. In the continuation of the exploration, a 20 \* 20 cm mass arising from the 1/3 lower rectum and invading the prostate and seminal vesicles was palpated. It was decided to perform Miles operation. The anal canal was released and taken into the abdomen. A radical prostatectomy was performed by the urology team in such a way that the prostate and seminal vesicles remained within the mass. Colostomy was removed from the left lower quadrant of the abdomen. The mass in the left axilla was excised and sent to pathology. The patient was discharged uneventfully on the 10th postoperative day. The pathological evaluation revealed that the stromal tumor in the jejunum was the primary focus and the masses in the rectum and left axilla were metastatic. In addition, it was found that the metastatic mass in the rectum was invasive to the prostate and seminal vesicles. There were no problems in the surgical margins. The patient's CT therapy and oncological follow-up are ongoing.

**Conclusion:** The primary treatment of GIST is surgery. When necessary, radical surgeries can be performed. It should be considered that there may be extraintestinal involvements. In order to prevent recurrence and metastasis after surgery CT should be continued.

**Keywords:** GIST, metastasis, radical surgery

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## PP-0384 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Hiatal Hernia and Peptic Ulcer Perforation

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Hiatus hernia is defined as a herniation of a part of the stomach from the esophageal hiatus in the diaphragm up to the thorax. Hiatus hernias are a group of diaphragmatic hernias. Diaphragmatic hernias may be congenital or acquired. Acquired diaphragmatic hernias may develop due to trauma. There are 4 types of diaphragmatic hernias which are acquired but not associated with trauma. Type I hiatal hernia (sliding, concentric, axial, slip hernia), Type II hiatal hernia (paraesophageal, rolling, rolling hernia), Type III hiatal hernia (mixed type, sliding and paraesophageal component, mixed type hernia), and Type IV hiatal hernia (Type II or Type III hernia, including other organs such as spleen, transverse colon, small intestine and pancreas in the hernia sac). Type II paraesophageal hernia is an acquired form of hernia in which the peritoneal hernia sac including the stomach fundus and sometimes intraabdominal organs such as the spleen or colon is displaced from normal esophageal hiatus to the posterior mediastinum and the etiology of which is unknown. Its most important feature is that the lower esophageal sphincter or the esophagogastric junction is not displaced and remains firmly on the lower side of the diaphragm owing to the phrenoesophageal ligament. The prevalence of paraesophageal hernias varies between 3.5% and 33% when all hernias associated with hiatus esophageus are examined. The most important complication is the acute strangulation of the hernia sac that can lead to

infarction and perforation of the organ within the hernia sac and massive hemorrhage. These life-threatening conditions occur in about one third of the patients and form an indication for emergency surgery. Chest pain, pressure sensation, respiratory distress and heart palpitations are the most common symptoms and signs and can be easily confused with angina pectoris. Chest radiography, upper gastrointestinal system (GIS) endoscopy, barium esophageal-gastric-duodenal (EGD) passage radiography, esophageal manometry and pH meter, and thoraco-abdominal computed tomography (CT) can be used as diagnostic methods. The choice of treatment is emergency surgical intervention, particularly in acute cases. Since the rate of serious complications is high in patients with paraesophageal hernia, some studies emphasize the importance of surgical treatment immediately after the establishment of diagnosis. In our case, a 78-year-old female patient was admitted to the emergency unit with respiratory distress, chest pain, and abdominal pain. In the abdominal examination, there was apparent tenderness and defense in the epigastrium. The values of hypoxia, leukocytosis, and BUN/cre were high in the blood gas analysis. The PA chest X-ray revealed air fluid level in the retrocardiac area. Free air was observed under the diaphragm. The abdominal CT revealed diffuse free air in the abdomen. The patient was taken to emergency surgery with the diagnoses of paraesophageal hernia and perforation. The stomach fundus was observed to be herniated to the thorax. The observation showed that the diameter of the hiatal defect was 6 cm and there was peptic ulcer perforation from the prepyloric region. The perforation was repaired primarily and primary cryoplasty was performed. The lodge fluids were cleared. The patient died of multiple organ failure on the postoperative 3rd day.

**Keywords:** Paraesophageal hernia, peptic ulcer, perforation

## PP-0385 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Ileum Perforation Due to Ingestion of Chicken Bone

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**Introduction:** The perforation of the gastrointestinal system with a foreign body is very rare and less than 1% of patients with foreign body ingestion. It is very important because it can be treated if diagnosed earlier. Otherwise, delayed diagnosis and treatment increase mortality and morbidity. Foreign body ingestion is usually seen in psychiatric and alcoholic patients and most of the foreign bodies that are swallowed are fecally removed after advancing through the gastrointestinal system without any problem. In this study, we aimed to present a case of ileum perforation caused by chicken bone found in laparotomy in a 61-year-old female patient, who was admitted to the emergency unit with the finding of acute abdomen.

**Case:** A 61-year-old woman presented to the emergency department with abdominal pain ongoing for one day. In the physical examination, she had diffuse tenderness, defense and rebound in the abdomen. Her leukocyte value was 22000/mm<sup>3</sup> and she had no subdiaphragmatic free air in the direct abdominal radiography in standing position. Because the abdominal tomography revealed inflamed small intestine loops in the right lower quadrant, fluid between the loops, and the image of a foreign body, emergency laparotomy was performed with the suspect of perforation. In the exploration, a 4-cm pointed chicken bone causing perforation at 2 different points adjacent to each other in the middle part of the ileum was detected. Segmentary small bowel resection and primary anastomosis were performed and the patient was discharged on the 6th day without any problems. In his retrospective anamnesis, it was learned that the patient ate chicken wings one day before.

**Conclusion:** Most of the swallowed foreign bodies are removed from the gastrointestinal system through fecal way without any problem, and especially the sharp ones may cause perforation. Foreign bodies that mostly cause gastrointestinal perforation include fish bones, chicken bones, prostheses, and sharp objects such as toothpicks. The clinical picture may present as peritonitis, localized abscess formation, bowel obstruction, and gastrointestinal system bleeding. Abdominal radiographs rarely help in the diagnosis. However, abdominal tomography is the most useful method for the detection of foreign bodies or complications. The most common area of perforation in foreign body cases is the terminal ileum and colon. The treatment often requires intestinal resection, but primary repair has sometimes been defined in the literature.

**Keywords:** Ileum perforation, chicken bone, foreign body

## PP-0386 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] The Effect of Neoadjuvant Chemotherapy on Anastomotic Healing in Patients with Gastric Cancer

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**Objective:** Gastrectomy is the basis of treatment for gastric cancer. Adjuvant chemotherapy has taken its place in the treatment protocol. However, it is still a matter of debate whether neoadjuvant chemotherapy has a place in the treatment of gastric cancer. In the present study, we investigated whether neoadjuvant chemotherapy has an effect on anastomotic healing.

**Material and Methods:** This prospective study included 39 gastric cancer patients who were admitted to the Departments of General Surgery and Medical Oncology at Yüzüncü Yıl University Medical Faculty. The cases were newly diagnosed between 03/2017 and 09/2017. Surgical treatments were performed at this interval. Fourteen of 39 patients underwent neoadjuvant chemotherapy. On the other hand, 25 patients were performed surgical treatment without applying neoadjuvant chemotherapy. During surgery, 1 cm<sup>3</sup> full-thickness tissue samples were taken from the stomach tissues with a tumor and with normal appearance at the most distal area to the tumor in the gastrectomy specimen. Protein levels were measured by using the 5-hydroxyproline level, which is a collagen precursor, and the Bradford method in the department of biochemistry. By the department of pathology, Hematoxylin-Eosin stained sections of the cases were stained with Masson's Trichrome and examined under light microscope, and fibrosis score was determined.

**Results:** The 5-hydroxyproline level measured in normal tissues was found to be approximately 2,23 µg hydroxyproline/g protein in the tissues applied neoadjuvant chemotherapy. In the tissues not given neoadjuvant chemotherapy, this level was 2.45 µg hydroxyproline/g protein. No statistically significant difference was found between the two groups in the statistical analysis. The 5-hydroxyproline level measured in tumor tissues was found to be approximately 1.76 µg hydroxyproline/g protein in the tissues given neoadjuvant chemotherapy and 1.77 µg hydroxyproline/g protein in the tissues not given neoadjuvant chemotherapy. In the statistical analysis, there was no significant difference between the two groups. The fibrosis scores evaluated in normal tissues were evaluated separately in the tissues given and not given neoadjuvant chemotherapy. No significant difference was detected between the two groups in the statistical analysis. Fibrosis scoring evaluated in tumor tissues was separately evaluated in the tissues applied and not applied neoadjuvant chemotherapy. In the statistical analysis, there was no significant difference between the two groups.

**Conclusion:** In a retrospective study investigating the effect of neoadjuvant chemoradiotherapy on anastomotic leak in America, it was stated that preoperative chemoradiotherapy did not increase the rate of anastomotic leakage. In an experimental study conducted in Japan, it was determined that neoadjuvant chemotherapy changed the bursting pressure in the anastomosis line. However, no rupture was reported in the groups. In addition, it was specified that neoadjuvant chemotherapy had no effect on the amount of tissue fibroblasts. In our study, the hydroxyproline levels in the tissue samples of the cases given and not given neoadjuvant chemotherapy were investigated and fibrosis state in the tissue was histopathologically examined. According to our results, there was no difference in the amounts of tissue fibroblasts in two groups. There was no increase or decrease in the hydroxyproline level, which is a collagen precursor. In the pathological examination, no significant difference was found between the two groups in terms of fibrosis score. Although there are opposing views in the literature, neoadjuvant chemotherapy application did not have a negative effect on anastomotic healing in our study.

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## PP-0387 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Case of Ameboma Mimicking Gastric Cancer

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**Introduction:** Amebiasis is a protozoan infectious disease caused by *Entamoeba histolytica*. It can cause masses that can be confused with malignancy by forming abscess foci that are rarely seen and called as ameboma. In this article, we aimed to present a case of ameboma that had to be performed subtotal gastrectomy.

**Case:** A 52-year-old female patient with nonspecific abdominal pain, vomiting, weight loss and night sweat was admitted to our clinic. In the patient without any significant feature in her history, there was no abnormal finding in the epigastric region except mild tenderness. In the laboratory analysis, leukocytosis and high CA 125 levels were detected. Eosinophilia was detected in peripheral blood smear. Abdominal computed tomography (CT) scan showed a 4 cm wall thickening in the pyloric region of the stomach. In the upper gastrointestinal system endoscopy, the antrum mucosa was normal, but there was a mass that appeared as an external compression. The patient was performed the whole body positron emission tomography with F-18 FDG. A mass causing compression to the lumen in the antrum and having SUV Max involvement at the level of malignancy was detected. The patient underwent subtotal gastrectomy and Roux-en-Y gastroenterostomy. As a result of the pathological examination, the mass with protrusion to the lumen at the level of the stomach antrum and having exophytic extension was determined to be ameboma including necrosis and abscess. After the pathological examination, the patient was given metronidazole for 2 weeks and then diloxanide furoate for 2 weeks. No pathology was detected in the control ultrasonography performed 8 weeks later.

**Discussion:** The amebiasis caused by *Entamoeba histolytica* may present with many different clinical manifestations such as extraintestinal or intestinal picture. It usually causes bloody and mucous diarrhea. This parasite entering the circulatory system can cause amoeba abscess in many organs. Moreover, it can rarely present with a mass lesion called ameboma. Ameboma is often seen in the form of intraluminal masses located in the cecum and the ascending colon and it may lead to obstruction. It is pos-

sible to diagnose the patients with intraluminal localization by endoscopic procedures. In cases that can be diagnosed through endoscopy, treatment with antibiotherapy is possible and unnecessary laparotomies can be avoided. Extraluminal localizations is rarer. For extraluminal cases, abdominal tomography can be helpful in diagnosis. The cases of ameboma located in the stomach are very rare and they can be seen with the invasion of ameboma located in the liver to the stomach wall and even with its opening to the lumen. It is possible to treat with metronidazole, tetracycline or diloxanide furoate and percutaneous drainage can be applied to cases with appropriate localization.

**Conclusion:** The ameboma may have intraluminal or extraluminal localization. The main treatment of the disease is antiparasitic drugs and also percutaneous drainage or surgical treatment, if there are findings of obstruction or compression.

**Keywords** Amoeba, ameboma, gastrectomy

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## PP-0388 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# A Rare Case Report; Primary Retroperitoneal Serous Cystadenoma

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**Introduction:** Primary retroperitoneal serous cyst adenomas are rare cystic lesions with unknown pathogenesis. Although the majority of tumors are benign, early diagnosis and resection are necessary to prevent malignant transformation, rupture and secondary infection. In this case, we aimed to present our patient who was operated with the pre-diagnosis of intraabdominal cystic mass, found to have peroperative retroperitoneal cystic mass, and reported to have serous cystadenoma in the pathological evaluation.

**Case:** A 39-year-old female patient was admitted to the outpatient clinic with the complaints of abdominal pain, nausea and constipation. The physical examination revealed mild distention in the abdomen and asymmetry in the inspection. A well-circumscribed formation not exceeding the midline was detected in the left side of the abdomen with palpation.

The contrast-enhanced computed tomography (iv) showed a 16x10 cm hypodense lesion with a content of liquid density in the left half of the abdomen, the margins of which could not be differentiated from the the lower pole of the left kidney and which caused compression and deviation in the neighboring bowel loops and had a contact with the psoas muscle in wide area (mesenteric cyst?). Following the completion of the preoperative preparations, the patient was taken to an operation, and a retroperitoneal cystic mass with a diameter of 20x15 cm that pushed the small bowel towards the right lower quadrant and did not exceed the midline of the abdomen was detected. The mass was excised. The postoperative pathology of the patient was reported as serous cystadenoma and her follow-ups are still going on.

**Conclusion:** Very few primary retroperitoneal cystic lesions have been reported in the literature. Most lesions are benign. They are mostly seen in women. They can remain asymptomatic until they reach a certain size and they are usually discovered when they reach very large sizes. In rare cases, these lesions may have malignancy potential. Complete excision of the cyst is recommended to prevent recurrence. The diagnosis of primary retroperitoneal serous cystadenoma should be considered in the differential diagnosis of all retroperitoneal cysts.

**Keywords:** Retroperitoneum, serous cystadenoma, primary

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## PP-0389 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# The Effect of Pycnogenol on Lymph Nodes in Peritoneal Adhesion Model, an Experimental Study

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**Objective:** In this study, it was aimed to investigate the effectiveness of pycnogenol, also called pinus pinaster bark extract, the antioxidant, antimicrobial and anti-inflammatory effects of which were demonstrated on the prevention or reduction of intraabdominal adhesions causing serious complications in the literature. Moreover, it was also aimed to investigate the effect of immunohistochemically free oxygen radicals on the intraabdominal adhesions and the contribution of the reactive lymph nodes detected in this adhesive tissue that we sampled around the cecum.

**Material and Methods:** Twenty-seven Wistar Albino rats were divided into 3 groups (n=9): Group 1 (SHAM); only laparotomy, Group 2 (Control group: After laparotomy, punctate hemorrhage was created in the cecum with cecal abrasion and 2 cc fluid for each rat was applied intraperitoneally with physiological saline solution. In Group 3 (experimental group), after laparotomy, punctate hemorrhage was created in the cecum by cecal abrasion method and sterile pycnogenol derivative prepared by dilution with physiological saline solution from 10 mg/kg was administered intraperitoneally. Re-laparotomy was performed to all groups on the 7th day, and the peritoneal tissue around the cecum was sampled and the rats were sacrificed. Histopathological parameters were evaluated with Hematoxylin & Eosin, Masson Trichrome, Glutathione S-transferase, Glutathione Reductase, SSO, and Catalase.

**Results:** There was a statistically significant difference in inflammation, lymph node dimensions and immunohistochemically free oxygen radicals in the group given pycnogenol and these parameters were found to be increased. In terms of fibrosis, no statistically significant difference was found between the control and experimental groups in both H & E and MT. (for fibrosis; Group 1 - 2: p value 0.001, Group 1 - 3: p value 0.001, Group 2 - 3 p value 0,730. (p<0.05). For inflammation: Group 1 - 2: p value 0.005, Group 1 - 3: p value 0.001, Group 2 - 3: p value 0,002 (p<0.05). For Masson Trikrom; Group 1 - 2: p value 0.001, Group 1 - 3 p value 0.001, Group 2 - 3 p value 0,996. (p<0.05). For lymph node size: Group 1 - 2: p value 0.003, Group 1 - 3; p value 0.001, Group 2 - 3; p value 0,024. (p<0.05). Total immunohistochemical free oxygen radicals; p 0.0001 (p<0.005). The number of lymph nodes; p 0.017 (p<0.005)

**Conclusion:** No positive result about that pycnogenol decreased intraabdominal adhesion was found, but it caused a severe inflammatory process in the tissue. There was also a significant increase in the size of the lymph nodes detected secondary to this inflammatory process. Additionally, in the immunohistochemical analysis performed to detect oxidative stress, it was determined that it increased free oxygen radicals in tissues.

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**Keywords:** Pycnogenol, free oxygen radicals, reactive lymphadenopathy, peritoneal adhesion

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## PP-0390 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Intestinal Mantle Cell Lymphoma Causing Ileoileal Invagination, A Case Report

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**Introduction:** Intestinal invaginations are frequently seen in children, especially under the age of 2 years, but rarely encountered in adults. Patients often present with abdominal pain, nausea, vomiting and ileus findings in the invaginations developing secondary to wall-induced intraluminal pathologies. In this article, we aimed to present our patient who was operated for intestinal invagination and pathologically reported to have as mantle cell lymphoma.

**Case:** A 32-year-old male patient was admitted to the emergency service with abdominal pain, nausea and vomiting. There was no defense and rebound in the physical examination. Nevertheless, he defined pain particularly in the lower abdominal quadrants. The value of Wbc was 12,7 K/uL and Hgb was 13,8 g/dl. In the intravenous contrast-enhanced computed tomography, there was a target finding consistent with invagination with an approximately 52 mm thickness and right paramedian localization in the distal ileal loops, blur in the omental fat planes in the neighborhood of the defined finding, and local air fluid levels in the distal ileal loops. The patient was operated after the completion of preoperative preparations. In the exploration, ileoileal invagination was detected at a distance of 20 cm from the ileocecal valve. When the invaginated area was reduced, an approximately 3x5 cm mass originating from the small intestine lumen, which was thought to cause invagination, was palpated. During the exploration, multiple intraluminal masses were palpated along the entire small bowel segment. In order to prevent tissue diagnosis and reinvasion, the 10-cm ileum segment having invagination was resected and end-to-end anastomosis with double folds was performed by hand. No other intraabdominal pathology was detected. On the postoperative 5th day, the patient was initiated regimen after the gas-stool discharge. He was discharged on the postoperative 7th day. The postoperative pathology was reported as mantle cell lymphoma. In the neck, axillary and inguinal USG of the patient, there were a large number of reactive lymph nodes with a short diameter of 8 mm in the bilateral upper cervical chain and in the axilla. In the bilateral inguinal region, 10.5x9.5 mm 6-7 LAPs without echogenic hilus were observed. Oncological treatment of the patient is ongoing.

**Conclusion:** Mantle cell lymphoma constitutes 3-10% of all non-Hodgkin's lymphomas in the western societies and its annual incidence is 2-3/100.000. It is observed 2 times more frequently in males. It gains an aggressive characteristic defined by resis-

tance to chemotherapy over time. The majority of the cases at the time of diagnosis are at advanced stage. Although rare, it can be seen as small intestine involvement causing invagination. For this reason, mantle cell lymphoma originating from the small intestine should be considered in patients was admitted to the emergency unit due to abdominal pain and found to have invagination in the radiological imaging.

**Keywords:** Lymphoma, invagination, mantle

## PP-0391 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] A Case of Phytobezoar Causing Ileum Obstruction

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**Introduction:** Bezoar is the solidification of non-digestible food components in the gastrointestinal system. Phytobezoars occur due to undigested residues of plant fiber foods. Although they are most commonly seen in the stomach, they can rarely be seen in the small intestine. 0.4% - 4% of all gastrointestinal system obstructions are caused by bezoars. In this study, we presented a case of small bowel obstruction due to phytobezoar.

**Case:** A 55-year-old male patient presented with abdominal pain, nausea and vomiting. He had a history of laparotomy due to non-vehicle traffic accident and coronary bypass. The abdominal examination of the patient revealed diffuse tenderness and rebound. There was no abnormality in the laboratory values. Air-fluid levels at the small intestine level were observed on direct abdominal X-ray. The computed tomography revealed an image consistent with bezoar at the small intestine level. The patient was performed laparotomy. There was a bezoar causing obstruction at the level of ileum. Enterotomy, removal of bezoar, and primary repair were performed. The patient with no problem in the postoperative follow-ups was discharged with recommendations.

**Conclusion:** Phytobezoars occur as a result of frequent consumption of high-fiber foods and insufficient chewing. In addition to frequent consumption of fiber foods, impaired motility due to previous gastric surgeries has been considered to be responsible in the etiology. They usually do not present with symptoms unless they cause obstruction. Imaging methods such as endoscopy, ultrasound, are tomography are helpful in the diagnosis. The bezoars developing in the small intestine are usually at the level of the terminal ileum and the ileocecal valve. Surgical removal of bezoar is the most important method in the treatment as well as conservative or endoscopic approaches. Nasogastric decompression and prokinetic agents are used in the treatment of asymptomatic bezoars. Bezoars that do not respond to conservative treatment or that cannot be broken endoscopically are surgically removed. Bezoars should be kept in mind in the differential diagnosis of patients presenting with the complaints of nausea, vomiting, and abdominal pain or with the signs of obstruction. Appropriate training should be given to patients feeding with high fiber foods and having undergone gastric surgery and the formation of bezoar should be tried to be prevented.

**Keywords:** Bezoar, ileus, laparotomy

## PP-0392 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Esophageal MANEC: A Case Report

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**Introduction:** In the classification of the World Health Organization 2010, gastrointestinal neuroendocrine tumors were classified as neuroendocrine tumor grade 1, neuroendocrine tumor grade 2, neuroendocrine carcinoma, mixed adenoneuroendocrine carcinoma, hyperplastic and neoplastic lesions. Esophageal mixed adenoneuroendocrine carcinomas (MANEC) are very rare cancers. These cancers generally displaying poor prognosis are mostly metastatic when they are detected. MANEC should contain at least 30% of each of the adenocarcinomatosis and neuroendocrine component. MANEC involves low and high-grade lesions. The neuroendocrine part may be well or poorly differentiated. In this study, it was aimed to present a patient with MANEC located in the middle part of the esophagus.

**Case:** A 57-year-old male patient presented with the complaint of swallowing difficulty gradually increasing in the last one year. It was learned from the anamnesis of the patient that he had weight loss and loss of appetite for the last few months. No abnormality was found in his history and the result of the physical examination was normal. In the esophagogastroscope of the

patient, whose laboratory values were within normal intervals, an ulcerative lesion was detected in the middle of the esophagus. The result of the pathological examination of the endoscopic biopsy was reported as a tumor displaying neuroendocrine differentiation. In the endoscopic ultrasonographic examination performed for staging, it was observed that the tumor invaded the submucosa. The positron emission tomography revealed that the mass was bordered by the esophagus and did not have distant metastasis. The patient underwent total esophagectomy with right thoracotomy, lymph node dissection of two areas, and cervical anastomosis with gastric transposition. The result of pathological examination was reported as MANEC. The tumor, the size of which was 8mm, was reported as T1b N0 M0 (surgical margins were negative and excised 40 lymph nodes were reactive) having Ki-67 index of 80%, less differentiated neuroendocrine component of 70%, and basaloid squamous component of 30%. In the postoperative period, the patient developed anastomosis leakage and he was followed up non-operatively. His fistula was closed spontaneously. After surgical treatment, chemotherapy was planned for the patient.

**Conclusion:** MANEC in the esophagus is a rare condition. The prognosis of these aggressive tumors is determined by the neuroendocrine part and they are mostly metastatic when detected. The surgical treatment is curative in rare cases diagnosed early.

**Keywords:** Ki- 67, MANEC, neuroendocrine carcinoma

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## PP-0393 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Marginal Ulcer Perforation After SADI-S

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**Introduction:** The Single Anastomosis Duodenoileal Bypass with Sleeve Gastrectomy (SADI-S), which is one of the contemporary surgical techniques, is a bariatric surgery technique and it is preferred in the treatment of obesity and diabetic patients. The data of long-term results and complications of this technique, which was defined in 2007, are just being included in the literature. In this report, we aimed to present a diabetic patient who had undergone SADI-S surgery 2 years ago and consulted to our emergency unit with marginal ulcer perforation.

**Case:** A 52-year-old male patient, who had been performed SADI-S procedure for the history of uncontrolled type II diabetes 2 years before, was admitted to our emergency clinic with the complaint of abdominal pain. There was no abnormality in the chest x-ray of the patient describing sudden onset of epigastric pain. Because of the presence of suspected free air image in the computed tomography performed due to clinical suspect, the decision of exploration was taken. When the abdomen was opened from the old incision line, a perforation area of 1.5 cm diameter was detected on the ground of marginal ulcer in the duodenoileal anastomosis and the Graham method was applied. The patient without any problem in the follow-ups was discharged on the 4th postoperative day with recovery.

**Conclusion:** While dominant symptoms such as chronic diarrhea and trace element deficiencies can be seen in patients with a history of previous SADI-S, delayed diagnosis may be prevented considering that marginal ulcer and associated perforations may develop.

**Keywords:** Bariatric surgery, marginal ulcer perforation, SADI-S

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## PP-0394 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Intestinal Volvulus: A Report of 10 Cases

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**Objective:** Intestinal volvulus is an emergency pathology requiring immediate surgical intervention, which results in death if intervened late. It is a condition in which necrosis and perforation may develop in association with hindered blood flow due to the torsion of the small intestine around its mesentery. In the etiology of intestinal volvulus, besides secondary to previous surgical operation, malignancies, long and narrow-angle mesentery, internal herniations, parasitic infections, high fiber foods eaten after a long meal interval, and primary intestinal volvulus are included.

**Material and Methods:** Ten patients treated in the Emergency Unit of Cerrahpaşa Medical Faculty between 2011 and 2018 were retrospectively evaluated. The patients were examined in terms of etiology, location, clinical findings, ASA scoring, and treatment strategies of volvulus.

**Results:** Of the patients diagnosed with complete obstruction due to intestinal volvulus, 5 were female and the mean age was 62.4 years (range: 33-87 years) and 5 were male and the mean age was 60.8 years (range: 52-69 years). In 6 of 10



patients, bride secondary to previous operations was detected. Three had bride secondary to internal herniation and one had no underlying cause. In 9 patients, ileal loop volvulus was located in the right lower quadrant. In the other one patient, it was located in the left upper quadrant and jejunal loop volvulus was existent. In the pathology results, 9 patients had gangrenous loops and 1 patient had loop that was both gangrenous and contained adenocarcinoma. The location of the internal herniations was transmesenteric in 2 cases and in the right paracolic area in one case. Almost all patients had diffuse abdominal pain, distention and vomiting at admission and acute phase values were higher in 6 patients. In the direct abdominal radiography, air fluid levels were observed. The abdominal tomographies revealed ileus findings. All patients were operated. While resection was not performed in 4 patients, it was performed in 6 patients. Of them, 4 patients were performed double-barreled ileostomy and 2 were performed end-to-end anastomosis. While 2 patients developed a need for postoperative intensive care, the follow-up of 8 patients continued in the emergency surgery service. The mean time of discharge was 11,6 days (range: 5-30 days).

**Conclusion:** Intestinal volvulus is a pathology requiring urgent surgical intervention. While taking the decision of resection for the ischemic segment during surgery, a waiting period of 15-20 minutes with hot compression will increase the accuracy of the decision. Short bowel syndrome did not develop in any of the patients. When malignancy was ruled out, etiology, the effect of volvulus etiology, rotation, and pathology on morbidity and mortality was not observed. ASA score is still a high-value indicator that affects operation, mortality and morbidity.

**Keywords:** Intestinal volvulus, internal herniation, intestinal obstruction, closed loop obstruction

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## PP-0395 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Gastrocolic Fistula Secondary to Transverse Colon Adenocarcinoma

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**Introduction:** Gastrocolic fistulas (GCF) are pathological pathways between a segment of the colon and the stomach. While they appear to be associated with more complicated peptic ulcers in the past, many GCF cases are caused by gastric or colon malignancies at present. They can be characterized as a rare clinical condition. In this study, a case of GCF developing secondary to transverse colon cancer was presented.

**Case:** A 55-year-old female patient was admitted to our outpatient clinic with the complaints of bloody diarrhea, weight loss and malodorous vomiting continuing for 3 weeks. The diarrhea, which was initially watery, began to be bloody within weeks, and the patient complained of diarrhea 4-6 times a day. The weight loss was 13 kg in 2 months and she had mild left upper quadrant pain. The vital signs of the patient without no abnormality in her and her familial histories were stable. In the physical examination, there was no sign in the left upper quadrant except tenderness. In the laboratory analyses, hemoglobin level was 10.2 g/dl, albumin was 2.5 gr/dl, and CEA was 13.7 mcg/L. While there was no characteristic in the gastroscopy planned with the current complaints and laboratory results, tumoral mass was detected in the splenic flexure in the colonoscopy. Biopsy result was reported as adenocarcinoma. Splenic flexure tumor and gastrocolic fistula were detected in the abdominal computed tomography. The patient was hospitalized, parenteral nutrition was started, and the picture of anemia was recovered. Then, the patient was operated and partial gastrectomy and left hemicolectomy were performed. The pathology was reported as colon adenocarcinoma containing 19 reactive lymph nodes invading and fistulizing into the stomach. In the postoperative follow-up, the patient without any problem was discharged and referred to the oncology department for adjuvant therapy.

**Conclusion:** GCF is very rare nowadays and it is usually seen due to malignant diseases of the gastrointestinal system. Most of the cases are of stomach or large bowel origin. In Western countries, while it mostly develops secondary to colon cancer, the most common cause is gastric cancer in the far eastern countries. GCF can also occur secondary to peptic ulcer, pancreatitis, pancreatic cancer, diverticular disease, inflammatory bowel diseases, drugs such as aspirin and steroid, some infections such as lymphoma, CMV and syphilis, and many surgical procedures. The age of occurrence is usually between 55 and 60 years, but it is rarely seen in children. Its classic symptoms include diarrhea, nausea, vomiting and weight loss. The establishment of diagnosis can be difficult. Endoscopy, barium radiography and computed tomography are the diagnostic methods. Although the first step in the treatment is the improvement of fluid treatment and nutritional status, the main treatment may vary in relation to the etiology. In patients with malignant etiology, adjuvant chemotherapy with radical en bloc surgery is the most appropriate option. The prognosis of GCF due to malignant disease is generally poor.

**Keywords:** Gastrocolic fistula, colon, adenocarcinoma, en blok resection

PP-0396 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## A Rare Cause of Small Bowel Obstruction: Internal Herniation Secondary to Ileum Diverticulum and Appendix Adhesion

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**Introduction:** Small intestine diverticula are frequently localized in the jejunum (80%) and usually asymptomatic. Symptomatic ones (10-30%) cause chronic nonspecific symptoms such as dyspepsia, postprandial pain, nausea, and vomiting. The most important complications are bleeding, perforation and obstruction. Although the rarest complication of the small intestine diverticula is obstruction, no cases of obstruction due to adhesion with appendix have been encountered in the literature. In this case report, we aimed to present the internal herniation due to adhesion between ileum diverticulum and appendiceal radix, the clinic of mechanical small bowel obstruction, and its treatment.

**Case:** A 29-year-old male patient was admitted to the emergency department with abdominal pain, nausea, vomiting, inability to defecate, and abdominal distention. It was learned from his history that his abdominal pain started 1 week ago and its severity increased for 3 days, and nausea and vomiting were added. With these complaints, he was admitted to the state hospital 2 days ago and performed appendectomy. After this operation, he was unable to defecate and had severe vomiting. His physical examination revealed a Mc Burney incision in the abdomen. The intestinal sounds were increased. He had diffuse rebound and defense. In the laboratory tests, Wbc was 16.090 u/L, CRP was 146 mg/L, amylase was 61 u/L, lipase was 13 u/L, and creatinine was 0,6 mg/dl. Abdominal tomography revealed diffuse air under the diaphragm, diffuse dilatation in the jejunal and ileal loops, air fluid levels, and diffuse free fluid with the 10 cm largest area in the perihepatic, perisplenic, and bilateral paracolic region. The appendix was measured as 12 mm and free air values were seen around it. Upon that, the patient was operated urgently and laparotomy was performed. In the exploration, it was observed that the patient was not performed appendectomy, the appendix was bridged with a diverticula formation due to adhesion at the level of ileum at an approximately 35 cm distance from the proximal area of the ileocecal valve, and small intestine loops were herniated in this region. An appendectomy and resection of the small intestine with an impaired circulation were performed to the patient. After the operation, wound site infection developed. The patient was discharged on the 12th postoperative day with healing. The pathological result was reported as "Diverticular structure: diverticulitis. Radix: chronic active inflammation".

**Conclusion:** Obstructions developing secondary to small intestine diverticula occur due to external compression associated with inflammatory pseudotumor effect, adhesions after recurrent diverticulitis attacks, and intestinal fibrous stenosis. In our case, it was thought that the ileum diverticulum and the appendix were bridged due to fibrous stenotic bands secondary to recurrent diverticulitis attacks and obstruction developed due to the herniation of the small bowel from here. Although rare, it should be remembered that small bowel diverticula can lead to bowel obstruction in different ways and diverticular complications should be considered especially in the differential diagnosis of mechanical small bowel obstruction.

**Keywords:** Appendix, small bowel, diverticulitis, ileus, obstruction

PP-0397 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## Our Experience of Percutaneous Endoscopic Gastrostomy: An Examination of 122 Cases

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**Objective:** The percutaneous endoscopic gastrostomy (PEG) procedure is the placement of a plastic tube in the stomach lumen from the abdominal wall in patients with impaired swallowing function or without swallowing function despite intact gastrointestinal system.

**Material and Methods:** The files of the patients who underwent PEG procedure in Sivas Numune Hospital between January 2015 and January 2017 were retrospectively reviewed.

**Results:** During this period, 122 patients were treated with PEG. Of the patients, 69 (56.5%) were male and 53 (43.4%) were female. The patients were between the ages of 20 and 85 years and the median age was 61 years. Of them, 98 (80.3%) had cere-

brovascular event, 21 (17.2%) had Alzheimer's disease, and 3 (2.4%) had amyotrophic lateral sclerosis. The complications were infection around the catheter in 12 (9.8%) patients, leakage in 4 (3.2%) patients, and Buried-bumper syndrome in 2 (1.6%) patients.

**Conclusion:** PEG is one of the most suitable options for feeding when enteral feeding is not possible for any reason. In patients that can be performed PEG, it should be preferred for long-term enteral nutrition because of being more economic, having lower risk of complication, and having high efficacy.

**Keywords:** Endoscopy, percutaneous endoscopic gastrostomy, PEG

## PP-0398 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# A Case of Acute Appendicitis Due to the Tip of the Appendix Left Long After Appendectomy

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**Introduction:** Common complications seen after appendectomy include wound site infection, abscess, stump leak, peritonitis, and ileus. Another rare complication is the development of acute appendicitis after appendectomy. Its incidence is 1 in 50000. The reason is that the appendix stump that is left long. In this article, we present a case of acute appendicitis due to the appendix tip left long after appendectomy.

**Case:** A 55-year-old male patient with abdominal pain was admitted to our clinic. It was learned from his anamnesis that he had undergone appendectomy in another center 1 year ago and he had been performed open abdomen treatment because of wound site infection and wound dehiscence after the procedure. The patient stated that his abdominal pain intermittently occurred after the operation, but the last attack was more severe. He did not have a history of any disease. In his physical examination, there was a sub- and supra-umbilical median incision scar. There was also a 10x15 cm fascial defect in this region. He had tenderness and defense in the lower right quadrant of the abdomen. The number of leukocytes was 16,000/mm<sup>3</sup>. Other complete blood count and biochemical values were normal. Abdominal ultrasonography and computed tomography showed no signs other than incisional hernia. The patient was operated for the diagnosis of acute abdomen. In the exploration, suture material of the stump was found in the area where appendectomy was applied. There was no problem in the stump. The 1.5 cm inflamed tip of the appendix with mesenteric veins one end of which were attached was seen just below the ileocecal junction. Appendectomy was performed. The patient, who did not develop any postoperative complication, was discharged on the 3rd day. The pathology result was reported as acute appendicitis.

**Conclusion:** The cause of acute appendicitis developing after appendectomy is inadequate appendectomy. The place of development has been classically reported as the stump of the appendix. In the literature, a case of acute appendicitis occurring due to leaving the tip of the appendix with the mesentery has been encountered. In this case, it was stated that right hemicolectomy was performed for a malignant polyp and the tip of the appendix with retrocecal localization was probably left. In our case, it was found that the tip of the appendix was left with its mesenteric vessels. The left part was in the retrocecal region at the posterior of the ileocecal junction. The patient's old surgical report was carefully re-examined. The report indicated that the appendix had been perforated from the middle part, there had been adhesions in the right lower quadrant, and it had been difficult to reveal the appendix due to the accumulation of inflammatory materials.

Because of these difficulties, it was probably thought that the retrocecal area could not be fully explored. As a result, it was considered that the appendix was tied from a point near the tip, supposing that it was appendix mesentery, and the remaining appendiceal tissue remained alive because its mesenteric vessels were not cut.

In appendectomy patients with the findings of acute appendicitis, the retrocecal area should be carefully explored for inadequate appendectomy if no other reason was found in the operation.

**Keywords:** Appendectomy, appendicitis, retrocecal

## PP-0399 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Robotic Gastrectomy Performed for Large GIST Located in the Lesser Curvature of the Stomach

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Despite the limitations in the literature for the laparoscopic surgery of gastrointestinal stromal tumor, the use of minimally invasive techniques is increasing day by day. Our aim in this case report is to demonstrate that the excision of GISTs in difficult areas such as small curvature can be applied with robotic surgery. In the literature, while large tumor excision in difficult regions such as pylorus and cardia has been reported, the robotic excision of 5 cm GIST in the lesser curvature is firstly presented.

A 44-year-old female patient presented with dyspepsia and bloating. The gastroscopy revealed a 2-cm lesion in the lesser curvature of the stomach, which caused an external compression on the stomach wall. In the computed tomography (CT), a 5 cm submucosal mass including cystic-necrotic foci was reported in the lesser curvature of the stomach. All parameters including tumor markers were found to be normal in the patient's biochemistry evaluation. Basen on these findings, an operation was planned for the patient. In the operation room, the patient was given trandelenburg position and applied insufflation with the subumbilical incision to provide a pressure of 12 mm/hg. After the placement of a 12 mm trocar, the abdominal cavity was explored with a robotic optic camera. In the lesser curvature of the stomach, an approximately 5 cm mass without invasion to the surrounding organs and any evidence of dissemination was observed. Other trocars were placed. Firstly, the vascular structures of the greater curvature were transected and the gastrocolic ligament was cut in order to reach the omental bursa. Subsequently, the vascular structures of the small curvature were transected by preserving the latarjet nerve. The stomach wall was opened with the help of L-hook. The mass was excised with 1-2 cm intact gastric tissue by using the Ligasure device. The stomach wall was closed with a continuous weilock suture and then a 3/0 vicryl Albert-Lembert suture. The mass was taken out of the abdomen by umbilical incision with the help of endobag. A Jackson-Pratt drain was placed under the stomach and the operation was terminated. The patient was discharged after 5-day follow-up without any complication. The patient's condition was observed to be good at the 2nd week control. As a result of pathology, low-grade epitheloid type GIST with a diameter of 5.5 cm and no ulcer and necrosis was reported. The mitotic index of the tumor was 2/50 HPF and the surgical margins were at the closest distance of 0.5 cm to the tumor. In GIST surgery, minimally invasive techniques have taken a long way in the last 10 years. However, the risk of fragmentation of the large tumors with difficult localization has increased in laparoscopic surgery and gastrotomy is required for obtaining normal surgical margin. The field of vision provided by the Da Vinci robot system and the ease of intracorporeal dissection suture offer confidence in the surgery of large gastric GIST with difficult localization. However, there are limited studies on robotic surgery in the literature and it is emphasized that further studies are required. We think that our case contributes to the literature as it is about robotic gastrectomy of a 5.5 cm GIST located in the lesser curvature of the stomach. In conclusion, we suggest that the robotic excision of gastric GIST is safe and applicable even if it is large and poorly located.

**Keywords:** Robotic gastrectomy, gastrointestinal stromal tumor, lesser curvature, large tumor

## PP-0400 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Regional Seasonal and Gastronomic Phytobezoar Outbreak (A Black Sea Classic)

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**Introduction:** Bezoars is the formation of a mass by non-digested foods in the stomach or small intestine. Bezoars are named according to their contents as phytobezoar, tricobezoar, lactobezoar, and pharmacobezoar. The most common type is phytobezoars. In our country, the Black Sea region is the region where phytobezoars are most commonly encountered because of its unique food consumption. The basic food accused for the formation of phytobezoar is a fruit that is called persimmon, which is consumed in the seasons of fall and winter. Consumption of this fruit causes the occurrence of serious number of bezoar cases and the general surgeons working in this region gain more experience in bezoar than those working in other regions. The aim of this study is to discuss the diagnosis and treatment of 21 phytobezoar cases treated in a bezoar season with our experience.

**Case:** Twenty-one patients (9 females and 12 males) aged between 24 and 78 years were treated for bezoar in the Bafra State Hospital between the dates of 01.11.2016 and 01.03.2017. Gastric localization was observed in 13 patients, intestinal localization in 6 patients, both gastric and intestinal localization in one patient, and duodenal localization in one patient. Of 13 patients with gastric bezoar, 8 were diagnosed with endoscopy and 5 with CT. All 6 patients with intestinal localization were diagnosed with CT. Of the 13 patients with gastric bezoar, 8 were given cola regimen and bezoar was milked into the jejunum. One of the milked cases was re-operated due to ileus. Gastrotomy was performed in 10 cases and bezoar was removed. The duodenal bezoar was removed and treated with Heineke-Mikulicz pyloroplasty. Of the 6 patients with intestinal localization, 4 were treated with enterotomy and 2 cases were treated by milking the bezoar into the cecum.

**Conclusion:** Phytobezoar is a serious problem seen in the Black Sea Region due to seasonal eating habits. In our region, the etiology of intestinal obstruction is different from literature. The most common cause of intestinal obstruction in the Black Sea is bezoar. CT and endoscopy are very effective in diagnosis. Contrary to a significant part of the literature, the cola regime has no significant place in the treatment. The main treatment is surgery. The surgical procedure varies according to the case.

**Keywords:** Black Sea, persimmon, bezoar

## PP-0401 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Our Laparoscopic Surgery Experience in Median Arcuate Syndrome

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**Objective:** Median arcuate syndrome presents with a decrease in the blood flow due to the narrowing caused by the compression of the median arcuate ligament on the celiac truncus and the diaphragm left crus hypertrophy and associated symptoms. Its treatment is surgery. Its incidence has been reported to be between 2.3% and 10% in the world. We aimed to share our results on patients who were operated with the diagnosis of median arcuate syndrome and our laparoscopic approach to treatment.

**Material and Methods:** The data of the patients performed laparoscopic surgery due to the diagnosis of median arcuate syndrome in our clinic between January 2015 and December 2017 were retrospectively analyzed through patient files and hospital automation system.

**Results:** The total number of patients was 4, including 3 male and 1 female. The age range was 26 to 74 years and the median age was 42 years. Their complaints were abdominal pain, abdominal distention, and nausea. They had colic pain in the epigastric region immediately after eating and weight loss due to the fear of eating. They had history of recurrent gastroscopy and further investigations due to weight loss, and also history of symptomatic treatments. Dynamic contrast-enhanced tomography (CT) of the abdomen was used in the diagnosis. The CT images showed a 50% -90% narrowing due to the compression of the median arcuate ligament in the celiac truncus. All of the patients underwent laparoscopic surgery and no conversion to the open surgery occurred. The operation time was 64-113 min, and the median duration was 76 min. The patients were approached in the reverse Trendelenburg position. Two 11 mm and two 5 mm trocars were used. Nathanson retractor was used from the 5-mm trocar in the epigastric region. The hepatogastric ligament was cut and the diaphragm right crus was dissected. The muscles on the aorta were cut until the celiac truncus with the help of hook and ligasure. The left gastric, splenic and common hepatic arteries were viewed and preserved. The ligament and muscle fibers causing compression on the celiac truncus were cut. No drain was placed in any of the patients. In the postoperative control CTs, it was observed that the calibration of the celiac truncus was returned to normal. The patients were discharged on the 3rd postoperative day. The duration of follow-up was between 3 and 40 months. It was seen that the symptoms were almost healed, their eating habits were normalized, weight loss was stopped, and they returned to their normal weights.

**Conclusion:** We suggest that laparoscopic surgery is an effective and safe treatment for median arcuate ligament syndrome.

**Keywords:** Arcuate, laparoscopy, ligament, median, syndrome

## PP-0402 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Gastrointestinal System Bleeding Requiring Surgical Treatment and Surgical Procedures: Single-Center Data

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**Objective:** Acute gastrointestinal system (GIS) bleeding is a common cause of mortality and morbidity. While 85% of GIS bleedings stop spontaneously with endoscopic and conservative treatment approach, 15% require aggressive approach. The aim of this study was to investigate the rate of patients who underwent surgical treatment for GIS bleeding, the condition that led to the choice of surgical treatment, and what type of surgical treatment was performed.

**Material and Methods:** The patients admitted to the emergency unit with GIS bleeding and performed endoscopic and colonoscopic evaluation between January 2017 and December 2017 were scanned retrospectively. Of these patients, those that were applied surgical treatments were determined. The reasons for surgery and the types of surgical procedures were retrospectively investigated.

**Results:** Of 1056 patients with GIS bleeding who were admitted to the gastroenterology endoscopy unit during one year, 56 (5.34%) had lower GIS bleeding. A total of 2 (0.18%) patients who presented with GIS bleeding were performed surgical treatment because of uncontrolled bleeding by endoscopic treatment. One of these patients had bleeding secondary to the vasculitic small bowel involvement of Wegener granulomatosis and bleeding control was provided by endoscopy-surgery hybrid method in this case. After emptying the small intestine content from the Treitz's ligament until the ileocecal valve, sequential

clamping was performed at 40-50 cm intervals. Hemorrhage localization was detected in the proximal jejunum, and the lumen was entered with gastroscopy after applying enterotomy to the hemorrhagic segment in the intestine. A large number of deep ulcer craters were detected in the proximal jejunum. The 20 cm intestinal segment was resected and end-to-end anastomosis was performed to control bleeding. In the other patient, GIS bleeding could not be controlled due to endoscopic intervention performed three times for gastric corpus Dieulafoy lesion. This patient was applied primary suture surgically and bleeding control was provided. General characteristics of patients, hemoglobin values and surgical techniques are given in the table.

**Conclusion:** The annual incidence of GIS bleedings is between 50 and 150 of 100,000 hospital admissions, and its mortality is still around 10% despite developments in diagnostic and therapeutic procedures and advanced life support. Surgical treatment should be considered for patients older than 60 years of age and having comorbidity and recurrent massive bleeding, those requiring more than 6 units of erythrocyte replacement within 24 hours, those being hemodynamically unstable, those undergoing unsuccessful endoscopic treatment, and those having ulcer with a high risk of re-bleeding. Only 0.18% of patients admitted to our hospital for GIS bleeding were treated surgically. Despite the developments in endoscopic treatment at present, multidisciplinary approach and surgical treatment is still needed in GIS bleedings.

**Keywords:** Gastrointestinal system bleedings, endoscopy, surgical treatments

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## PP-0403 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Comparison of Efficiencies of Laparoscopic Transversus Abdominis Plane Block and Local Anesthesia at Trocar Site After Laparoscopic Appendectomy

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**Objective:** The most common operation performed in the general surgery practice is appendectomy. With the spread of laparoscopy, minimally invasive procedures have become more preferable and less pain, early mobilization, early return to work and better cosmetic results have been obtained in the postoperative period. A method for reducing postoperative pain is the ultrasound-guided transversus abdominis plane (TAP) block. The aim of this study was to compare the efficacy of local anesthetic (LA) infiltration in the trocar site with transversus abdominis plane block performed under direct laparoscopic view without using ultrasound in patients undergoing laparoscopic appendectomy for acute appendicitis.

**Material and Methods:** The patients who underwent laparoscopic appendectomy due to the diagnosis of appendicitis in the Department of General Surgery at Health Sciences University, Fatih Sultan Mehmet Education and Research Hospital between August 2017 and January 2018 were randomized into two groups. Group 1 was performed TAP block under laparoscopic view and Group 2 was performed LA infiltration in the trocar site. The pain levels of the patients were calculated by using visual analogue score (VAS) at the postoperative 0th, 2nd, 6th, 12th and 24th hours. The duration of operation, postoperative nausea and vomiting complaints, the first times of gas-stool discharge, the first times of mobilization, duration of hospital stay, and the doses of nonsteroidal analgesic drugs and opioids were recorded and compared. The statistical analysis was performed using SPSS version 20.0 software. The p values below 0.05 were evaluated as statistically significant.

**Results:** There was no significant difference between the groups in terms of age, gender, BMI and ASA scores ( $p > 0.05$ ). The VAS values recorded at 0th, 2nd, 6th, 12th and 24th hours were significantly lower in the TAP block group than in the trocar site group. The duration of hospital stay in the TAP block group was detected to be shorter ( $p: 0.002$ ). Moreover, analgesic consumption in TAP block group was lower compared to the trocar site group ( $p: 0,023$ ).

**Conclusion:** The TAP block method applied by surgeon during laparoscopic appendectomy is more effective than local anesthesia application in the trocar site. Due to decreased analgesic use, intestinal movements may be returned in the early period and this may shorten the length of hospitalization.

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## PP-0404 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Our Laparoscopic Experience in Gastric Tumors

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**Objective:** Laparoscopic surgery has been used in gastric tumors at an increasing rate in recent years. In addition to the known advantages of minimally invasive surgery in selected cases, its oncologic results similar to open surgery have been reported. We

aimed to share our perioperative experience and early oncologic outcomes in patients who underwent laparoscopic resection for gastric tumor in our clinic.

**Material and Methods:** Data of patients who were performed laparoscopic gastric resection with the diagnosis of stomach tumor in our clinic between January 2014 and December 2017 were retrospectively evaluated from hospital automation system.

**Results:** The number of patients undergoing laparoscopic surgery between the stated dates was 11. Five patients were male and 6 were female. Of the operated patients, 6 had gastrointestinal stromal tumor (GIST), 4 had adenocarcinoma, and one had polyp including in situ adenocarcinoma focus. The age range of the patients who were operated with the diagnosis of GIST was between 30 and 72 years and the median age was 48 years. The diameter of the tumor was between 2 cm and 15.5 cm and the median tumor diameter was 4 cm. All patients were performed laparoscopic wedge resection. There were no tumors in the surgical margins. No mortality or morbidity was observed. The age range of the patients with adenocarcinoma was 45-82 years and the median age was 63 years. While the tumor was in the antrum in 3 patients, it was located in the cardia in 1 patient. Laparoscopic radical distal subtotal gastrectomy was performed in those with distal localization. Intracorporeal suture and stapler were used in distal resections. In the patient who underwent total gastrectomy, resection was performed laparoscopically and anastomosis was carried out with the help of laparotomy and stapler. While the stage was T2 in one patient, it was T4 in the other 3 patients. The number of excised lymph nodes varied between 25 and 55 and the median number was 33. The number of lymph nodes in the patient with T4 tumor was 55 and 4 of them were positive. The other patients were N0. One patient developed an early port site herniation. Laparotomy and reduction were applied. This patient died on the 60th postoperative day with the diagnosis of respiratory insufficiency due to pneumonia. Laparoscopic wedge resection was performed in the case with in situ cancer. The surgical margins were clean. The duration of surgery was between 24 and 245 min and the median time was 48 min. The patients were approached in the reverse trendelenburg position. Five ports were used. Two 11 mm and three 5 mm trocars were used. Nathanson retractor was used from the 5-mm trocar in the epigastric region. The patients were discharged in 2-7 days. While 4 patients were placed drain on the anastomosis line, 7 patients were followed without drain. The drains were removed after beginning oral intake on the postoperative 3rd day. The follow-up period was 6-37 months and the median follow-up period was 21 months. No recurrence was observed during the follow-up period.

**Conclusion:** Although our series is limited, in order to benefit from the advantages of minimally invasive surgery in addition to oncologic results similar to open surgery, we suggest that laparoscopic surgery should be considered as a treatment method in gastric tumors in centers having experience in open stomach tumor surgery and intracorporeal anastomosis and skills in advanced laparoscopic surgery.

**Keywords:** Surgery, laparoscopy, stomach, tumor

## PP-0405 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Is Laparoscopic Approach Suitable for Cases Considered to be Stump Appendicitis?

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Appendicitis is one of the most common causes of acute abdomen in our country and all over the world, which often requires emergency intervention. Stump appendicitis should be remembered in patients admitted to the emergency department with pain in the right lower quadrant pain and having old Mcburney incision scar. In this case, we aimed to explain the treatment of our patient with the diagnosis of stump appendicitis through laparoscopic approach. When patients with a history of appendectomy are admitted to the emergency unit due to pain in the right lower quadrant, the dilemma of surgeon can be inevitable. The inflammation developing in the residual appendix after incomplete appendectomy is called stump appendicitis and its incidence can be one in 50 thousand appendectomies. In our case, a 26-year-old male patient with right lower quadrant pain that started 12 hours ago had a history of appendectomy performed 6 years before. Abdominal examination showed an old Mcburney incision scar in the inspection. In the physical examination, right lower quadrant tenderness and voluntary defense were observed in the palpation. In laboratory tests, there was no significant finding except the white blood count of 12,200/mm<sup>3</sup> and two-fold increase in the values of AST and ALT. In the ultrasonographic examination, a 6-7 mm appendicolith with an acoustic shadow in the right lower quadrant was seen and the appendix could not be detected. Computed tomography examination was reported as a 6 mm appendicolith in the neighborhood of the anterior region of the cecum in the right lower quadrant. In one patient, after the diagnosis of stump appendicitis was confirmed and the other pathologies were ruled out by inserting an optical port, stump appendicitis was clearly demonstrated by inserting two working ports. The minor vascular structures feeding the residual appendix tissue were ligated with the help of the energy device. The root of the appendix was closed with two polymer endoclips, and inflamed appendix and adhered fatty tissues were resected as fragments. Cecoplasty was performed with Endosuture. The patient was discharged after 3-day follow-up without any problem.

In conclusion, surgeons should be aware of stump appendicitis and keep it in mind for its etiology in patients undergoing appendectomy and having right lower quadrant pain. In cases causing dilemma in terms of exploration, laparoscopy can often be a

diagnostic tool and it is possible to successfully complete the resection laparoscopically in selected cases. However, appendiceal root should be well visualized in every appendectomy operation and the appendix should be excised without leaving stump.

**Keywords:** Appendectomy, stump, laparoscopy

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PP-0406 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## Ileus Associated with Multisegment Invagination Caused by Peutz-Jeghers Polyps: A Case Report

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Peutz-Jeghers syndrome is an autosomal dominant disorder characterized by hamartomatous polyps and mucocutaneous pigmentation. Most of polyps are located in the small intestine and frequently cause jejuno-jejunal and jejuno-ileal intussusception in children.

While the spontaneous reduction of invagination caused by small polyps is possible, endoscopic or surgical treatment may be required for the large ones.

In this article, we aimed to present a 25-year-old female patient who was previously diagnosed with Peutz-Jeghers syndrome by the findings of physical examination and upper gastrointestinal system endoscopy and was admitted with the symptoms of ileus ongoing for 8 days.

**Keywords:** Peutz-Jeghers, invagination, polyp

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PP-0407 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## A Rare Cause of Acute Abdomen in Adult Patients, Intestinal Invagination

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Invagination is a pathological condition that occurs mostly in pediatric patients but rarely in adult patients, and develops due to the progression of the intestinal proximal segment into the bowel loop. Patients are frequently admitted to the emergency unit with the complaints of gastrointestinal obstruction such as abdominal pain, nausea, vomiting, and inability to defecate. In this report, we presented a patient who was admitted to the emergency unit due to abdominal pain, whose physical examination result was consistent with acute abdomen, and who was detected to have intestinal invagination in the exploration. A 50-year-old male patient was admitted to the emergency department with the complaints of abdominal pain, nausea, vomiting, and inability to defecate going on for one week. He had a history of renal transplantation performed 15 years ago due to chronic renal failure and re-transplantation because of chronic rejection developing in the follow-ups and immunosuppressive therapy 5 months ago. His physical examination revealed defense in all quadrants of the abdomen. In the analyses, no additional pathology was found except for leukocytosis with neutrophil predominance. The patient who was observed to have a target sign appearance in the whole abdomen CT without contrast-enhancement, was taken to emergency operation with the pre-diagnosis of invagination. In the exploration, an image consistent with invagination at the 150th cm from the Treitz ligament was detected and segmental small bowel resection and end-to-end anastomosis were performed. The drain of the patient with gas-stool discharge was removed and he was discharged on the 5th day with healing. Invagination is a pathological condition that mostly occurs in pediatric patients, but rarely in adult patients, with a progression of the proximal segment of the intestine into the bowel loop in the distal area. Although the etiopathogenesis of invagination is not exactly known yet, it is thought that intralumen irritation or benign or malignant mass increases the intestinal peristalsis and causes invagination. In adult patients, it has a similar incidence in male and female patients and it is frequently seen between the 6th and 7th decades. Invaginations according to the localizations are put into five groups as enteric, ileocecal (ileocolic), colocolic, colorectal, and rectorectal. In a study conducted by Begos et al., it was detected that invaginations observed in adult patients arise from the small bowel at the rate of 64% and from the colon at the rate of 36%. It was reported that, of small bowel invaginations, 23% were due to idiopathic pathologies, 63% were due to benign pathologies, and 14% were due to malignant pathologies. Since invagination mostly de-



velops due to benign causes in the pediatric age group, deinvagination is applied predominantly in the treatment. In the adult patient group, the potential for malignancy in the etiology of invagination should always be considered. Due to the presence of the risks of possible tumor perforation, intraluminal transplantation of the tumor, and anastomotic leakage in the deinvaginated edematous inflamed bowel loops, the primary treatment of invagination in the adults is surgery. Intestinal invagination should also be kept in mind in the differential diagnosis of patients consulting to the emergency unit with the symptoms of gastrointestinal obstruction and having the picture of acute abdomen. In adult patients, the possible underlying malignancy should be considered for invagination and surgical resection should be applied in its treatment.

**Keywords:** Acute abdomen, mechanical bowel obstruction, intestinal invagination, resection

## PP-0408 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Gastric Fluid Calprotectin Values

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**Objective:** Calprotectin is a member of the S100 protein family. It is a calcium and zinc binding protein found in the cytoplasm of human neutrophil and monocyte. Calprotectin is released from activated neutrophils and acts as a marker of inflammation. Calprotectin has chemotactic factor activity as well as antimicrobial effect and proinflammatory cytokine functions. In this study, the aim was to investigate the usability of gastric fluid calprotectin value in the diagnosis of gastric cancer.

**Material and Methods:** Esophagogastroduodenoscopy was performed in patients with upper gastrointestinal system complaints between February and May 2004. Diagnostic biopsy and gastric fluid samples were obtained. According to the biopsy results, three different groups, each of which included 20 cases, were formed as: Normal (Group 1), gastric ulcer (Group 2), and gastric cancer (Group 3). Calprotectin values of gastric fluids were investigated through the micro-ELISA method.

**Results:** The mean gastric fluid calprotectin values were 16.96 ng/ml, 73.58 ng/ml and 143.07 ng/ml for Group 1, 2 and 3, respectively. After statistical comparisons among the groups, p values were found to be p=0.023, p=0.0001 and p=0.0001 between group 1-group 2, group 1- group 3, and group 2- group 3, respectively.

**Conclusion:** Calprotectin value increases in correlation with the intensity of inflammation and reaches the highest value with gastric cancer. Because gastric fluid calprotectin values are high in gastric cancer, the gastric fluid calprotectin value may be used as a screening test in early stage gastric cancers. In order to verify this hypothesis, researches should be conducted in larger case series.

**Keywords:** Calprotectin, gastric fluid, diagnosis, screening

## PP-0409 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Our Experience in Gastric Cancer

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Gastric cancer is the fourth most common type of cancer across the world and it is on the third rank among the cancer-related deaths. The significant risk factors include helicobacter, smoked foods, pernicious anemia, previous gastric surgery, intestinal metaplasia, and genetic cancer syndromes. The 5-year survival rate is about 30% despite all aggressive treatments in cases. In this retrospective study, it was aimed to determine the prognoses of patients operated for gastric cancer according to the frequency of histological subtypes, the type of performed surgery, and lymph node profile. The data of 352 patients who underwent elective surgery for gastric cancer between January 2010 and December 2017 were retrospectively analyzed. Of the cases, 59 (16.7%) were female and 293 (83.3%) were male and the mean age was 62.2 years. Most of the tumors were located in the antrum. Total gastrectomy (TG) was performed in 254 (72.4%) patients, subtotal gastrectomy (STG) in 78 (22.4%) patients, wedge resection in 16 (4.5%) patients, and local excision in 2 (0.57) patients. In the intraoperative period, splenectomy was performed for splenic bleeding in 4 (1.13%) patients and for invasion in 3 (0.85%) patients. Segmentary transverse colon resection was performed for invasion in 2 (0.57%) cases. Eight (2, 26%) patients underwent distal esophagectomy for positive surgical margin. Due to invasion, one case (0.25%) was performed nephrectomy and one patient (0.25%) was applied surrenelectomy and distal pancreatectomy. Total gastrectomy was performed in 3 patients for remnant stomach ca. Completion gastrectomy was performed in 2 patients considering their pathological results. The mean number of affected lymph nodes in our patients was 20.9 in patients

undergoing STG and 27.9 in patients undergoing TG. The number of metastasis detected in the excised lymph nodes was 4.7 on average in patients undergoing STG and 5.6 in patients undergoing TG. The mean survival was 26.1 months. Eleven patients died in the postoperative first month and 119 patients died in the postoperative first 5 years. The 5-year survival rate was 30.6%. The survival in mucinous adenocarcinoma and cohesive cell adenocarcinoma was detected to be quite short. Papillary adenocarcinoma and intestinal cell subtype had longer survival. The majority of our cases had stage 3 (62%) tumors. The best known treatment method for gastric cancer is curative resection. In the early and late results of the Dutch Gastric Cancer Research and Medical Research Council Survey, although morbidity and mortality rates after D1 and D2 LND were found to be significantly higher, it was reported that D2 lymphadenectomy displayed lower mortality associated with local, regional recurrence and gastric cancer than D1 lymphadenectomy. The authors concluded that D2 LND could be performed safely, and D2 was the recommended type of lymphadenectomy for resectable gastric cancer. Since 1960, the Japanese surgeons have made more aggressive interventions in gastric cancer surgery than in the Western countries and they have routinely applied D2 lymph node dissection in the treatment of gastric cancer. In our cases, approximately 25 lymph nodes were removed although the lymph node dissection type was not routinely indicated. In Japan and Korea, extensive endoscopic screening has led to the rate of patients with early gastric cancer to increase up to 50%. Pathological staging of the tumor in gastric cancer is important for the prediction of survival. In our cases, after the examination of the resection specimens, it was found that the advanced pathological stages (stage III, 62%) were more common. In our country, patients mostly consult at advanced stage because gastric cancer is not included in the cancer screening program and there are a few number of endoscopy centers. In order to perform minimally surgical interventions or endoscopic interventions more frequently, it is necessary to detect the cases at early stages with screening programs.

**Keywords:** Gastric cancer, invasive, survival

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## PP-0410 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Patient with Peutz-Jeghers Syndrome Presenting with Inoperable Periampullary Tumor

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**Introduction:** Peutz-Jeghers syndrome (PJS) is an autosomal dominant inherited genetic syndrome characterized by multiple hamartomatous polyps and mucocutaneous pigmentation in the gastrointestinal tract. In patients with Peutz-Jeghers syndrome, the risk of gastrointestinal and non-gastrointestinal malignancies is increased.

**Case:** The patient, who had complaints of weight loss, nausea and vomiting for about 2 months was admitted to the emergency service and then referred to the general surgery unit for further examination and treatment. The patient's physical examination revealed no evidence of defense-rebound in the abdomen, palpable mass lesions in the periumbilical region were present, and hyperpigmented areas were observed on the lips. The patient had undergone laparotomy about 25 years ago and had no knowledge about the reason. In laboratory tests; WBC was 14200, HGB was 10,6, Creatine was 1,51, Albumin was 3,6, and Bilirubin was N. A 10 cm mass at the head of the pancreas was detected in the tomography of the abdomen and the stomach was in a pitotic state. Upper gastrointestinal endoscopy showed polypoid appearance in the stomach fundus, pylorus could not be passed. The exploratory laparotomy was performed. At the head of the pancreas, all the retroperitoneal area filled with tumoral lesion was palpated. Implants on the gall bladder and hepatoduodenal ligaments were observed. Multiple invagination sites were observed in the small intestines and the polyps were palpated after being reduced. Multiple enterotomies were performed and polyps were excised. Gastrojejunostomy was performed on the patient due to duodenal obstruction secondary to lack of oral intake. The implants were biopsied and the operation was terminated. The patient who started the regimen on the postoperative 2nd day passed gas on the 3rd day. On the 4th day, the patient who started tolerating the regimen was discharged from the hospital. According to the patient's pathology, the implants were reported to be compatible with mucinous adenocarcinoma and multiple hamartomatous small intestine polyps.

**Conclusion:** The patient was examined with the pre-diagnosis of gastric outlet obstruction and was detected a mass on the head of the pancreas. The patient was diagnosed with PJ syndrome with multiple PJS type polyps and characteristic pigmentations on the lips. Pancreatic cancer has been reported in 11-36% of patients with Peutz-Jeghers syndrome. Patients and their relatives were informed about PJS family screening.

**Keywords:** Peutz-jeghers syndrome, polyp, periampullary tumor

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## PP-0411 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] A Rare Ileus Case: Abdominal Cocoon

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**Introduction:** We will present an unusual case who had been taken to an emergency operation due to ileus but was realized that he was an abdominal cocoon case during literature research.

**Case:** A 79-year-old male patient was admitted to the emergency unit with abdominal pain of about 2 days, continuous swelling of the abdomen, nausea-vomiting, inability of passing gas and defecating. These complaints were intermittent for about 2 years and were relieved by the use of laxative. However, at the time of admission his complaints were more severe and were not relieved. The patient with no feature in the family history had a history of asthma, hypertension, and an appendectomy story that was older than 30 years. There was abdominal distension, abdominal respiration, metallic ringing sound, widespread sensitivity and defense, but no rebound in the abdomen. Other system examinations were normal. Laboratory parameters were normal. Abdominal graph showed that air-fluid levels were at the level of small intestine. In the CT, there was a dilated intestine. The patient was hospitalized with a diagnosis of ileus. Nasogastric decompression and intravenous hydration therapy were started. After 2 days of follow-up, laparotomy was planned for the patient who did not recover clinically. In the exploration, it was seen that the loops of the small intestines were covered with a membrane-like formation that enveloped the whole of the small intestine which was dilated, with widespread brid and torsion. The intestines were taken out of the abdomen and de-torted. Then, after the inter-intestinal transfer was observed, the operation was terminated. The patient who didn't have any additional problems in the follow-ups was discharged.

**Conclusion:** A rare cause of intestinal obstruction, the abdominal cocoon is characterized by partial or total encroachment of the small intestine with a fibrous membrane. This situation can be seen as idiopathic as it was in our case. It may also be seen in patients undergoing peritoneal dialysis, major abdominal surgery, ventriculoperitoneal shunting, and secondary to some medications. Clinical symptoms may occur in the form of recurrent abdominal pain, distention, nausea, vomiting, weight loss, and sometimes a palpable mass in the abdomen. Although definitive diagnosis is made by observing in the laparotomy that small intestine loop is covered with a fibrous band, fibrous bands with contrast enhancement surrounding the conglomerated small intestine loop can be seen in the contrasting abdominal tomography. As a result, abdominal cocoon is a disease difficult to diagnose. Often it is diagnosed during laparotomy. In the Laparotomy, it should be directed to the primary cause of the intestinal obstruction. Since fibrous bands between the intestines can be recurrent and can also lead to serious complications, there is no need to open the bands and perform more aggressive approaches.

**Keywords:** Ileus, abdominal cocoon, acute abdomen

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**PP-0412 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]**

## Diagnostic and Interventional Role of the Endoscopy in Management of Upper Gastrointestinal Bleeding in Patients with Long-Term Warfarin Use

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**Objective:** Upper Gastrointestinal System Bleeding (UGIB) is one of the deadly complications that can occur during the use of warfarin. Endoscopy has an important role in UGIB management. In our study, we aimed to emphasize the diagnostic and interventional role of endoscopy in patients who develop UGIB during the use of warfarin.

**Material and Methods:** By reviewing outpatient clinic records, patient admission and endoscopy records of patients admitted to our emergency department with UGIB during the use of warfarin between January 2009 and January 2018, demographics, comorbidity, laboratory and clinical findings, operative records with interventional procedures if available, morbidity and mortality were evaluated retrospectively. The Rockall score was used for the risk assessment in the diagnosis together with the comorbidities and the Forrest classification was used for defining the UGIB lesions.

**Results:** During the study, the number of patients who were admitted to the emergency unit with UGIB was 2471, and 147 of them who were using warfarin were included in the study. The average age of the patients was 72 (23-96) and F/M=64/83. 55.7% (n=82) of the patients were evaluated as Rockall 4 and 5 at the time of admission. 29.3% of the patients (n=43) were unstable

during initial evaluation. The average INR value of the patients at the time of admission was  $5.3 \pm 0.3$ , and  $INR > 4$  was found in 49.6% (n=73) of the patients. Gastroscopic evaluation showed that 17.6% (n=26) of the lesions were Forrest Ia, Ib and 2a, and hemostasis was achieved with the injection of SF + adrenaline (1: 10000). Nine of these patients (34.6%) underwent a second SF + adrenaline injection on the resumption or continuation of the bleeding during the 24-hour follow-up, and hemostasis was provided.

**Conclusion:** In geriatric patients with high comorbidity and long-term warfarin use, UGIB is one of the most important life-threatening complications. Gastroscopic intervention performed without delay in the early period is the most basic modality for rapid diagnosis and treatment.

**Keywords:** Gastrointestinal bleeding, endoscopy, injection therapy

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## PP-0413 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# The Role of Simple Blood Parameters in the Detection of Liver Metastases in Patients with Gastric Cancer

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**Objective:** Gastric cancer is the second most common cancer in the world and the third most common cancer in our country. Therefore, clinicians continue to search for simple and easily applicable predictive markers that can predict the prognosis of the disease at the time of diagnosis. In our study, we aimed to demonstrate the effects of fibrinogen, mean platelet volume (MPV), neutrophil lymphocyte ratio (NLO), and platelet lymphocyte ratio (PLO), which were taken as acute phase reactants in clinical use, in predicting the presence of metastases in patients diagnosed with liver metastasis and undergoing operation due to gastric cancer.

**Material and Methods:** File records of patients who underwent surgery for stomach cancer in the General Surgery Clinic of the School of Medicine of the University of Kafkas between June 2012 and June 2017 were retrospectively screened. Age, gender, tumor location, histopathological examination of the surgical material, preoperative 1st day NLO, PLO, MPV and fibrinogen values, presence of liver metastases and postoperative 30-day early mortality rates were recorded from the patients' file records. Patients were divided into two groups according to the presence of liver metastasis: patients with liver metastasis were group 1 and patients without liver metastasis were group 2. The comparison of the parameters for both groups were performed. Patients with infective disease history, acute intoxication, coronary artery disease, cerebrovascular disease, additional malignancy at the time of admission or 7 days prior to the admission, patients who had active blood transfusions in the last week, and patients with missing information in file recordings were not included in the study. A total of 104 patients were included in our study.

**Results:** The median value for age was 65 years (min: 24 max: 88) in 104 patients in the study. The ratio of female to male was 29/75. The most common localization of the cancer was (50.0%) distal 1/3. According to the TNM stage, the most common stage was determined as 4 (44.2%). Distant organ metastasis was detected in 46 patients (44.2%) while early stage gastric cancer was detected in 20 patients. Postoperative 30-day mortality was 10. The demographic characteristics of the patients are presented. The age and gender characteristics of stomach cancer patients with or without liver metastasis were homogeneously distributed (p: 0.421 and p: 0.839). There were no differences between the groups in terms of the family history of the patients and the tumor stomach segments (p: 0.118 and p: 0.587). PLO, NLO and fibrinogen values were found to be significantly higher in the liver metastases group (p: 0.001, p<0.001 and p<0.001), while MPV values in preoperative period were not different between the groups (p: 0.672). When the common effects of age, gender and PLO, NLO and fibrinogen values were analyzed separately on liver metastasis, it was determined that fibrinogen and PLO could predict metastasis independently of other parameters (p<0.001 and p: 0.001).

**Conclusion:** Although further prospective studies are still needed, we have come to the conclusion that PLO at the time of admission may be a predictive value for the detection of early stage and distant organ metastasis in gastric cancer.

**Keywords:** Stomach cancer, blood parameters, liver metastasis

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## PP-0414 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Bezoar-Related Mechanical Gastrointestinal Obstruction

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**Objective:** Bezoar is a rare cause of mechanical bowel obstruction. It is difficult to diagnose bezoar related ileus with clinical evaluation because they have no specific symptoms. Computed tomography allows the diagnosis of bezoar related ileus easily. In this study, we aimed to share the results of patients who were followed up for bezoar related ileus in our department.

**Material and Methods:** The patients who were operated due to bezoar ileus between December 1999 and February 2018 at Başkent University Adana Dr. Turgut Noyan Application and Research Center, Department of General Surgery were included in the study. Patients whose ileus were related to other reasons and whose ileus regressed with medical treatment were excluded from the study. Patients were examined retrospectively. Patients were evaluated for demographics, bezoar location, surgery performed, number and diameter of bezoar, hospital stay and complication.

**Results:** Thirty-nine patients underwent surgery due to bezoar-related ileus. The average age of the patients was  $63.8 \pm 11.7$  years. The ratio of female to male was 17/22. The additional disease was absent in only 8 (20.5%) patients. 32 (82%) patients had a history of stomach surgery. Primary gastrectomy had been performed in 3 patients (7.7%), 19 patients (48.7%) had had bilateral gastrojejunostomy, and restoration and omentopexy of peptic ulcer perforation had been performed in 10 patients (25.6%). In 19 (48.7%) patients the bezoar site was jejunum, in 15 (38.5%) patients it was in the stomach and 5 (12.8%) had it in the ileum. 21 (53.8%) patients were treated with milking and 18 (46.2%) patients underwent gastrotomy or enterotomy. The number of bezoars was 1 in 33 (84.6%) patients. A maximum of 4 bezoars were found in one patient. The average diameter of the bezoar was determined as  $4.88 \pm 2.25$  cm (min 2-max 10 cm). The average time from first surgery to ileus was  $18.8 \pm 11.6$  years. The average operation time was  $103 \pm 41.7$  minutes, average hospital stay was  $8 \pm 4.1$  days and average follow-up time was determined as  $52.6 \pm 34.5$  months. 14 (35.9%) patients were found to have complications and the most common complication was wound site infection (17.9%). A statistically significant difference was found between bezoar diameter ( $P=0.000$ ) with hospital stay ( $P=0.46$ ) and bezoar location. Furthermore, when milking was compared with gastrotomy/enterotomy, statistically significant differences were found in terms of hospital stay ( $P=0.002$ ) and bezoar location ( $P=0.002$ ).

**Conclusion:** Despite the fact that bezoar is a rare cause of ileus, surgical intervention is often required. We recommend that treatment with milking be preferred to gastrotomy/enterotomy as the duration of hospital stay is shorter.

**Keywords:** Bezoar, ileus, mechanical bowel obstruction, obstruction

## PP-0415 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Carney Triad (Stomach Multifocal GIST)

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**Introduction:** We aimed to emphasize the importance of lymph node dissection in multifocal Gastrointestinal Stromal Tumors in the stomach antrum and to present the rare Carney triad.

**Case:** The patient was a 19-year-old female with no complaints. On the examination of the lesion seen on the chest x-ray which had been taken in order for a job interview, a mass was detected in the stomach. The laboratory values and tumor markers were normal. In the endoscopy, swollen submucosal masses with lobular appearance were observed in the antrum and were interpreted as GIST. Endosonography revealed a 1 cm subepithelial lesion distal to the esophagus (leiomyoma?) and 3 subepithelial lesions, the largest 6 cm in size, distal to the corpus and gastric antrum. In the abdominal CT;  $6 \times 5$  cm and  $4,5 \times 6$  cm in size solid lesion in the abdomen, in the thorax CT;  $45 \times 35$  mm mass in the upper lobe of the left lung (hamartoma?, chondroma?), and LAPs were detected in addition to in addition to the abdominal CT findings. Since endoscopic and endosonography biopsy results were not sufficient for diagnosis, percutaneous tru-cut biopsy was performed and findings consistent with epithelioid tumor was observed and reported as GIST. Subtotal gastrectomy, lymph node dissection, esophageal mass enucleation operation were applied to the patient. According to the pathology report, 3 multifocal (the largest one was 7 cm) masses and 4 masses 0.5-1.5 cm in size were reported as epithelioid high grade stromal tumor, 2 metastases (N1) in 23 lymph nodes, and lesion in the esophagus: leiomyoma (pathological stage: PT4N1Mx) were reported. In the third postoperative month, wedge resection was performed on the lesion in the lung and the pathology was reported as chondroid hamartoma. Due to the high risk, imatinib was initiated as the oncological treatment.

**Conclusion:** Gastrointestinal stromal tumors that are usually seen in the 6th-7th decades are mesenchymal tumors. It is rare in children and young people. (1-2%) Carney triad was first described in 1977 as a rare syndrome that is nonhereditary, multifocal stomach GIST, seen among the young, mostly among females (90%), extraadrenal paraganglioma accompanied by pulmonary chondroma. Adrenocortical adenoma and esophageal leiomyoma were added in 1999. At least two of these components were found to be sufficient for the diagnosis. Histologically, 2/3 patients are epithelioid phenotype and all are KIT (+), lymph node involvement is 29% and sporadic GIST has LN metastasis below 2%. GIST is resistant to conventional CT and RT and the only curative treatment is surgery. Imatinib is given to metastatic and high risk patients and the control success rate is 70-85%. In conclusion, Carney triad is a rare syndrome in young women. It should be remembered in multifocal gastric stromal tumors and at least two of these parameters should be present: young age, female sex, extraadrenal paraganglioma, pulmonary chondroma,

adrenocortical adenoma, oesophageal leiomyoma. One of the most important features is that while lymph node dissection in sporadic GIST is not recommended, lymph node dissection is recommended in multifocal stomach GIST with 29-40% lymph node metastasis. Our case was young woman with gastric antrum multifocal GIST and esophageal leiomyoma. 2/23 metastases were found in lymph node dissection. She is still on imatinib treatment.

**Keywords:** Carney triad, lymph node dissection, stromal tumor

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## PP-0416 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Analysis of the Factors Affecting Survival in Patients Undergoing Curative Surgery for Gastric Adenocancer

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**Objective:** To investigate clinicopathologic features of the patients who had been performed curative gastrectomy and the factors affecting postoperative survival.

**Material and Methods:** The files of 644 patients who underwent gastrectomy in İzmir Katip Çelebi University, Atatürk Training and Research Hospital, General Surgery Department between January 2007 and January 2017 were retrospectively reviewed. 359 patients with gastric adenocancer who had undergone curative gastrectomy were included in the study. In these patients, the effects of various factors on survival were investigated.

**Results:** The average age of the patients was  $59.2 \pm 11.6$  (29-83) and 48.2% were over 60 years old. The median age was found to be 60. 244 (68%) of the patients were male and 115 (32%) were female. The average follow-up time was calculated as  $29.9 \pm 26.9$  months (2-128). The median survival was calculated as  $23 \pm 2.3$  months (18.388-27.612). Advanced age, blood type A, presence of coronary artery disease, smoking, decreased preoperative protein and albumin with carcinoembryonic antigen and cancer antigen 19-9 elevation, total gastrectomy, splenectomy, R1 resection, proximal placement of the tumor, large tumor size, the presence of perinural invasion and lymphovascular invasion, diffuse type, poorly cohesive type, poorly differentiated histological grade, advanced T stage, advanced N stage, advanced N ratio, advanced N stage in patient group who had removal of 15 or more lymph nodes were removed, advanced TNM stage, the presence of recurrent disease were found to be poor prognostic factors that significantly reduce survival in univariate analysis ( $p < 0.05$ ).

**Conclusion:** R1 resection, splenectomy, prognosis of advanced TNM and development of recurrence are independent risk factors poor prognosis.

**Keywords:** Gastrectomy, curative resection, stomach cancer, prognostic factor

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## PP-0417 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# The Contribution of FDG-PET-CT on the Diagnosis and Staging of Gastric Ring Cell Carcinoma

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**Objective:** Stomach cancer (SC) is the fifth most common cancer in the world. The most common types of SC are adenocarcinomas (AC) and stony ring cell carcinomas (SRC). 18F-fluoro-2-deoxy-glucose positron emission tomography/computed tomography (FDG-PET/CT) is a useful method for detecting primary cancer stage and distant metastasis. We aim to evaluate the diagnostic and predictive value of FDG-PET/CT in staging SRC.

**Material and Methods:** For primary staging, 292 patients (average age:  $62.3 \pm 11.4$ ) who had undergone 18F-FDG PET/CT were included in the study. Clinicopathologic features and maximal standard uptake value (SUV) max were compared in histologically defined subtypes (AC, SRC).

**Results:** 220 of 229 patients (75.3%) were male and 72 (24.7%) were female. 69.9% (n=204) were diagnosed with AC and 30.1% (n=88) were diagnosed with SRC. SRC cases (58.1±12.2 years) were younger than AC (64.2±10.6 years) cases (p=0.000). FDG uptake was detected with 18F-FDG PET/CT in 290 patients in primary lesions. The average total SUV max was 12.9±8.7. FDG (SUV) max was higher in AC (14.3±8.7%) than in SRC (9.7±7.7) (P=0.000). In 58 (26.9%) patients with SRC and 18F-FDG PET/CT and in 158 (73.1%) AC patients, regional lymph node (RLN) metastasis was detected (p=0.046). A statistically larger average metastatic RLN diameter was found in patients with AC (1.6±1.2 cm) compared to the patients with SRC (1.1±0.8 cm) (p=0.011). RLN avg. SUVmax was higher in patients with AC than in the SRC (SUVmax=8.3±9.4, 5.6±8.5; p=0.020, respectively). The primary organ SUV max was significantly higher in RLN positive patients (11.2±8.7) with SRC than in RLN-negative SRC (6.8±3.9) patients (p=0.002). The primary organ SUVmax was higher in organ metastatic SRC (15.4±8.6) than the nonmetastatic SRC (9.07±7.4) (p=0.019). There was no statistically significant difference in terms of sex, stomach wall thickness, primary lesion dimensions, SUVmax of lymph nodes, distant LN, and organ metastasis (p>0.05) between AC and SRC groups.

**Conclusion:** 18F-FDG PET/CT may contribute to the diagnosis, staging and prognosis assessment of patients, despite the recent advances in diagnosis and treatment of SC. In patients with TYC lesions, low FDG uptake was determined compatible to the literature, compared to the SC. The method was found to be a safe and noninvasive procedure to differentiate between SC and TYC lesions. Furthermore, FDG SUVmax values were significantly increased in patients with SRC with RLN and organ metastases. In conclusion, further studies with larger study groups should be performed in order to obtain more reliable results in local advanced or metastatic cases of histopathologic subtypes of SC.

**Keywords:** 18F-fluoro-2-deoxy-glucose positron emission tomography/computed tomography (FDG-PET/CT), SUVmax, gastric ring cell carcinoma

## PP-0418 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Superior Mesenteric Artery Syndrome (Wilkie Syndrome)

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**Introduction:** Superior mesenteric artery syndrome, first described by the Austrian professor Card von Rokitansky in 1842, is the clinical symptom and findings resulting from the third part of the duodenum being trapped between the aorta and the superior mesenteric artery (SMA). It is seen when the angle between the abdominal aorta and SMA is 6°-25°. Loss of fat tissue, which is a different consequence of weight loss, and acute angulation of SMA are considered as etiological factors. SMA syndrome is also called Wilkie syndrome. The disease can be diagnosed by combining clinical and radiological findings. For treatment conservative or surgical interventions might be performed. In conservative treatment it is intended that the patient be nourished, gain weight and thus increase the fat tissue to prevent acute angulation. Surgical treatment is the by-pass or anastomosis techniques to provide a passage of jejunum passage.

**Case:** A 23-year-old male patient was admitted to the emergency room for a month of ongoing nausea, vomiting and pain in the epigastric region. The patient stated that he had been having eating problems for a long time and that he had lost about 6 kg of weight in the previous month. Nothing specific was identified in the patient's laboratory findings. On the abdominal ultrasonography, moderate dilatation was observed in the first and second side of the stomach and duodenum. In the contrasted abdominal computed tomography scan, stenosis was observed in the third side of the duodenum. Endoscopy revealed continuous clearance in the pyloric duct along with advanced dilatation in the duodenum. In the contrasted abdominal tomography, external compression in the third part of the duodenum was, dilatation on the compression. Furthermore, it was observed that the third part of the duodenum was jammed between superior mesenteric artery and aorta. The patient whose complaints had been relieved with supportive care was scheduled for a follow-up.

**Conclusion:** Superior mesenteric artery syndrome is one of the difficult to diagnose syndromes. There are no pathognomonic findings in the patient's history and examination. In most of the patients, symptoms such as vomiting, abstinence, premature satiety and upper abdominal pain are present. In patients with superior mesenteric artery syndrome, depending on the severity and cause of duodenal obstruction, there are complaints of long term and intermittent exacerbation of the abdominal pain. Our patient also was admitted to our unit with complaints of abdominal pain, nausea and vomiting. SMA syndrome rarely starts acutely and manifests itself as complete ileus development. In cases of acute mechanical intestinal obstruction, acute gastric dilation or bilious vomiting may present as a symptom of proximal small bowel obstruction. These clinical findings were also found in our patient's history. Patients' pain generally decreases with postural changes such as lying face downwards or on left decubitus, in order to increase the angle between SMA and aorta. Our patient also showed relaxation when lying face downwards. SMA syndrome should be considered in the differential diagnosis of patients with unknown complaints of nausea, vomiting and weight loss and congestion at the upper gastrointestinal system. Via the contrast enhanced upper abdominal CT, stenosis in the form of the external compression in the duodenum and in the passage imaging, the partial or complete occlusion in the third

part of the duodenum are the findings that make the diagnosis possible. In cases where medical treatment is not successful, duodenojejunostomy is the most commonly used surgical method.

**Keywords:** Superior mesenteric artery syndrome, wilkie syndrome, duodenal obstruction

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## PP-0419 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Presence of Konduitte Stapler Line Gap in Patients Undergoing Intrathoracic Gastric Conduit: Management of the Patient

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**Introduction:** The main treatment Esophagus carcinoma is the tracheal continuum via esophagectomy and reconstruction. The main reconstructive organ is the stomach and this procedure is associated with high morbidity. Leakage from the gastric conduit stapler line causes mediastinitis and puts the patient's life in danger and its treatment is still controversial. Since different treatments are suggested in this case, we aim to present the surgical management of this fatal condition.

**Case:** The patient was 59 years old and was admitted to our unit with dysphagia and retrosternal pain. Endoscopy revealed lower thoracic distal esophagus carcinoma. Adenocarcinoma was diagnosed as a result of endoscopic biopsy. The patient was performed Iwor-Lewis type (right thoracotomy, subcostal abdominal laparotomy, partial esophagogastrectomy, esophagogastrostomy with gastric conduit). The gastric tube was about 20 cm long and the esophagogastrostomy was performed with a 25 mm circular stapler. 75 mm cartridges were used in the construction of the gastric conduit. No additional serosal stitches were placed on the stapler line. Leakage test was performed with methylene blue in the postoperative period. The patient was started on oral food on the 6th day since no leakage had been detected. On the tenth day fever and dyspnea started. The bilious fluid was observed coming from the thorax tube. Emergency endoscopy was performed. A gap of 8 cm was detected on the stapler line in the stomach tube. During emergency thoracotomy, two leakage areas of 1 cm and 8 cm were detected. Stomach conduit was taken into the abdomen. The patient underwent cervical esophagostomy, esophagectomy with proximal gastric resection and nutritional gastrostomy. On the 5th day of re-thoracotomy, thoracotomy evantration was experienced. Continuous irrigation of the pleural space was performed. The patient died on the 16th day due to multiple organ failure.

**Conclusion:** Intrathoracic reconstruction is the main surgical option for distal esophageal tumors. Stomach tubing prepared in the reconstruction can be used. There is no data showing that reinforcement stitches placed on the stapler line prevent the leakage. Early endoscopy is useful and stents can be placed in the gaps below 2 cm. Surgical treatment should be performed in cases where nonstable and large defects are detected in gastric conduit.

**Keywords:** Gastric conduit, stapler, intrathoracic

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## PP-0420 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Unexpected Complications after Gastric Cancer Surgery

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**Objective:** Anastomotic leakage after total gastrectomy causes high morbidity and mortality. Early detection and use of new operative techniques have a positive effect on mortality and morbidity. Discussion of the management of anastomosis leakage and pancreatic fistula in a patient who underwent total gastrectomy distal pancreatectomy and D2 dissection.

**Material and Methods:** Ulcerovegatan mass extending from the small curvature to the cardiovascular mass was revealed in the gastroscopy performed upon weight loss and dyspeptic complaints in a 62 year old male patient. Endoscopic bx: adenocarcinoma. Total gastrectomy + D2 lymph node dissection + distal pancreatectomy + splenectomy were performed on the patient. Postoperative Pathology report: Mucinous adenocarcinoma. Metastatic lymph nodes: 18, reactive lymph nodes: 23. It was evaluated as T3N3bM0 stage 3b. On the 6th postoperative day, the patient was operated on the development of tachycardia, tachypnea, dyspnea, fever, intestinal infiltration from the drain, and leakage from the closed segment of the tip-side esophagojejunostomy in fluoroscopy. Anastomotic leakage was closed with linear stapler and it was seen that since the end of the jejunal loop was adjacent to the edge of the pancreatic tissue and the tissue was exposed to pancreatic enzymes, the leakage was found to be fragile to be closed with the suture. Upon this, drains were placed in the place where the leakage



was and near the pancreas tissue. Peroperative esophagoscopy was performed and the esophagojejunostomy anastomosis line was found to be intact and the stent was placed to bypass the leakage, the guide wire was placed, feeding jejunostomy was performed and bilateral thoracic tube was placed. The next day, a stent was placed with the help of a guide wire to cover the anastomosis of the esophagojejunostomy endoscopically. The drainage in the right thorax tube, which was 200-300cc/day serous until the 5th day, began to appear blurred, while there was nothing coming from the abdominal drains. Amylase (2541) from the fluid from the thorax tube was found to be high. Somatostatin was initiated and the pancreatic fistula was expected to be closed. During this period, the patient was fed through geogenicostomy. However, due to the amount coming from the right thorax tube they did not decrease, the patient was operated on the postoperative 20th day. Pancreas lodge and the previous operation site were seen to be quite fibrotic. This region was entered through transverse colon. The leakage in the trunk of the pancreas was controlled by prolene sutures. A drain was placed in that site. 250-300cc/day came from the drain in the first week. Then it decreased to an average of 15-20 cc daily. The drain was removed. The stent in the esophagus was removed 6 weeks after the date of insertion.

**Results:** The risk of esophagojejunostomy anastomosis applied during total gastrectomy for gastric cancer is still the most important source of mortality and morbidity due to leakage risk in the early period. While some of the anastomosis leakage can be treated nonoperatively in the acute period, the majority of them require urgent operation. In our case, we think that anastomosis leakage is due to the leakage of pancreatic tissue. The successful treatment of anastomosis leak and the subsequent pancreatic fistula was possible with a multidisciplinary approach.

**Conclusion:** Early diagnosis of anastomotic leakage and treatment for the cause and place of the leak reduces mortality and morbidity of the patient.

**Keywords:** Stomach cancer, complications, pancreatic fistula

## PP-0421 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# A Rare Cause of Ileo-Ileal Invagination: Inflammatory Fibroid Polyps (Vanek's Tumor)

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**Introduction:** Inflammatory fibroid polyp (IFP) or Vanek's tumor is a benign lesion of the gastrointestinal tract that develops from the submucosa. They often cause intestinal obstruction, invagination and rarely gastrointestinal bleeding. In this report, we aimed to present a 47-year-old male patient who was operated for mechanical bowel obstruction and was detected with ileo-ileal invagination with IFP pathology in his operation.

**Case:** A forty-seven-year-old male patient presented to our gastroenterology outpatient unit of our hospital with complaints of pain, especially on the right side of the abdomen, intermittent diarrhea and weight loss, which had continued for 2 months. Examination of other systems was evaluated as normal. The laboratory values of the patient were WBC: 14270 K/u (4X10<sup>3</sup>-10x10<sup>3</sup>) and neutrophil dominance were present. Hg: 14 g/dL (12-16), CRP: 5.84mg/dL (<0.5), vitamin B12: 174 pg/mL (211-911). There is diffuse wall thickening at the terminal ileum level and this level has an invagination appearance. In the colonoscopy, grade 1 internal hemorrhoids were found in the anal canal and a mass of 20 cm proximal to the ileocecal valve in the ileum was detected. Pathology report of the mass after the biopsy was reported as exudative material of ulcer. General surgery consultation was requested with a preliminary diagnosis of invagination in the small intestine. The patient was operated according to examination and CT findings. At surgery, ileo-ileal invagination to the terminal ileum with the size of 20-25cm was detected. Small bowel resection was performed. In the macroscopic follow-up, a polypoid smoothly with a well-circumscribed lesion of 6x3.5x3.2 cm was observed in the resection material of the intestine. Atypia and mitosis were not present in spindle cells. In immunohistochemical studies, tumor cells were stained positively with CD34, fascin and SMA focally. S100, CD117, DOG1, desmin, ALK were negative and Ki67 proliferation index was below 5%. With these histomorphological and immunohistochemical findings, the patient was diagnosed with inflammatory fibroid polyp. The patient did not develop any complications in the postoperative period and was discharged 3 days after the operation.

**Conclusion:** Inflammatory fibroid polyp is a rare benign mesenchymal tumor of the gastrointestinal tract caused by submucosa. The exact incidence of IFP is unknown. This disease was first described by Vanek in 1949 as gastric submucosal granuloma with eosinophilic infiltration. IFP is most common in the small intestine (18%-20%) after the stomach. After the diagnosis of invagination in adults, resection is inevitable in order to prevent complications such as ischemia, necrosis and perforation. However, for the invaginated region, whether to prefer the removal of the region with segmental resection or a more radical surgical intervention is still a matter of debate in the literature. Segmental resection is recommended in recent studies. In our case, we preferred to perform a radical surgery due to the detection of mesenteric lymphadenopathies during segmental resection and operation. In conclusion, inflammatory fibroid polyp (IFP) or Vanek's tumor is a benign lesion of the

gastrointestinal tract that is rarely seen and originating from submucosa. It should be kept in mind that the etiology might be IFP in patients who are considered to have invagination after being evaluated with anamnesis, clinical examination, laboratory, and imaging methods.

**Keywords:** Inflammatory fibroid polyp, invagination, Vanek's tumor

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## PP-0422 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Small-Intestine Enteropathy Associated T-cell Lymphoma Perforation

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**Introduction:** Primary small intestine lymphomas are rare tumors and are extranodal lymphomas. They constitute 1% of malignant tumors of the gastrointestinal tract and the most common type is diffuse large B-cell type. This type of lymphoma is thought to develop from low grade MALT lymphoma. Enteropathy Associated T-cell lymphoma (EATL) is the most rare type. They originate from the malignant transformation of intra-epithelial T lymphocytes. It is most commonly involved in the proximal small intestines and is thought to be caused by celiac disease (CD). There are macroscopically multiple ulcerated lesions in the EATL and may cause clinical manifestations such as perforation, obstruction and bleeding. In this article, we aimed to present a perforated EATL case with literature due to its rarity.

**Case:** A 65-year-old male patient was admitted to the emergency unit with severe abdominal pain. He had a history of diarrhea and excessive weight loss for 6 months. In his physical examination, the abdomen was defensive and had rebound in all quadrants. Laboratory values included low leukocytosis (17,000 K/L) and low hemogram (8 g/dL), and high hypoalbuminemia (1.6 g/dL), hypopotasemia (2.4 mmol/L) and C-Reactive Protein (CRP) (15 mg/dL). In the PACXR (Posterior-Anterior Chest X-ray) and below-diaphragm free air and abdominal ultrasonography, there was prevalent intra-abdominal fluid. In accordance with these findings, the patient was taken to an urgent surgery with a prediagnosis of perforation. In the exploration; Intrauterine diffuse fluid (exudative), proximal jejunum mass-related perforation and all small intestine mesos had multiple lymphadenopathies. The perforated small bowel segment was resected and anastomosis was performed side by side. The patient was discharged uneventfully on the fifth postoperative day. Histopathological diagnosis of the patient was reported as EATL. The patient was referred to the hematology department for chemotherapy treatment. In the third month of follow-up, he died.

**Conclusion:** EATL has poor prognosis and 5-year survival rates are below 20%.

**Keywords:** Small intestine, lymphoma, T-cell

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## PP-0423 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Investigation of the Effect of Atmospheric Cold Plasma Application on the Prevention of Peritoneal Adhesion

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**Objective:** Peritoneal adhesion (PA) formation is extremely common after abdominopelvic operations. PA is caused by pathologic wound healing caused by factors such as ischemia, infection and bleeding. Atmospheric pressure cold plasma (APCP) is known to be effective against these factors. In this study, we aimed to investigate the effect of APCP on PA prevention.

**Material and Methods:** Sixteen CD-1 male mice were used in the study. Subjects were randomly divided into two groups. Serosal abrasion in the cecum and excision of the parietal peritoneum excision from the right lower quadrant were performed in order to create an adhesion model. Group I (control group) was not performed an adhesion prevention method. In Group II (plasma group), APCP was applied for 60 seconds on the areas where an adhesion model had been formed. All the subjects were sacrificed on the postoperative 10th day. Macroscopic Knightly and Linsky adhesion classifications were applied to the areas where adhesion model was formed in all subjects. The modeled areas were excised as a whole and sent to the pathology labora-

tory for evaluation of the microscopic Zühlke classification. Classification scores were evaluated with statistical analysis (Mann Whitney-U-test).

**Results:** The average scores of the Knightly, Linsky and Zühlke classifications of the cecum in Group I were 2.6; 2.1 and 2.6 respectively. In Group II, the average scores were 0.5; 1.1 and 1.3. Accordingly, the difference between Knightly and Zühlke classification scores was statistically significant in favor of Group II ( $p=0.015$ ;  $p=0.018$ , respectively). In Group I, the average scores of the Knightly, Linsky and Zühlke classifications of the parietal peritoneum were 3.3; 3,8 and 3,4. The average scores of Group II were 1.6; 1.3 and 1.5. According to each of the 3 categories (Knightly, Linsky, Zühlke), the difference between the groups was significantly in favor of Group II ( $p=0.005$ ;  $p<0.001$ ;  $p<0.001$ , respectively).

**Conclusion:** In this study, it has been shown that APCP might be macroscopically and microscopically effective in preventing PA. A new field has emerged in which both APCP and PA can be investigated. The data obtained will guide the studies in this field.

**Keywords:** Atmospheric pressure cold plasma (ABSP), peritoneal adhesion (PA), wound healing

## PP-0424 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Mesenteric Vein Thrombosis Secondary to Heterozygous Factor V Leiden, Prothrombin G20210A and Homozygous Methylene Tetrahydrofolate Reductase C677T

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**Introduction:** Mesenteric vein thrombosis (MVT) is a rare cause of mesenteric ischemia and there are usually underlying predisposing factors. MVT is responsible for 5% to 15% of all cases of acute mesenteric ischemia. We presented the patient who was operated for mesenteric vein thrombosis secondary to Heterozygous Factor V Leiden, Prothrombin G20210A and Homozygous Methylene Tetrahydrofolate Reductase C677T.

**Case:** A 36-year-old male patient was admitted to the emergency service of our hospital due to abdominal pain that had been lasting for 2 days. He had complaints of nausea, vomiting and fever with widespread increasing abdominal pain that had started two days ago. Physical examination revealed hypoactive intestinal sounds and abdominal widespread tenderness, defense and rebound. It was detected that Leukocyte: 12540K/u and CRP: 8,96 mg/dL during the initial examination. Intravenous contrast-enhanced abdominal computed tomography (CT) examination showed ileal wall thickening, edema and minimal infiltration fluid in the surrounding mesenteric tissue. Surrounding mesenteric tissue was edematous. Filling defect that might be compatible with thrombus in the superior mesenteric vein was monitored. In the exploration, gangrene was present in all small bowel loops starting from 70 cm from treitz and remaining 20 cm from the ileocecal valve. Massive small intestine resection was performed. Terminal jejunostomy and ileostomy were performed. In the early postoperative period, low molecular weight heparin (LMWH) and parenteral nutrition were started. Short bowel syndrome diet was started on the 7th postoperative day. Tests were asked for possible hypercoagulability. The homozygote mutation was reported at MTHFR C677T and heterozygote was reported at factor 2 (prothrombin) and factor 5 leiden (G1691A). Protein S (63.7%), protein C (59%), Active protein C resistance ratio (1.6 Sn), anti-thrombin 3 antigen (73%), vitamin B12 and folate values were reported to be low. Homocysteine levels of 10.2 idmol/L, anticardiolipin and antiphospholipid were normal. After 5 days of LMWH treatment, oral warfarin treatment was bridged. The patient still remains in our unit on postoperative day 42.

**Conclusion:** Firstly, Elliot described MVT as a cause of mesenteric ischemia in 1895. 80% of these patients had an underlying predisposing factor (secondary MVT). The purpose of the initial MVT treatment is to find the underlying causes including protein C, protein S and antithrombin deficiencies, recurrent abortus, anticardiolipin antibodies, platelet aggregation and abnormalities in hyperhomocysteinemia and provide a treatment. In a retrospective study conducted by Amitrano et al, in mesenteric patients the prevalence of thrombophilia genotypes (75%), Factor 5 leiden (25%), prothrombin G2021A (25%) and MTHFR prothrombotic defects (50%) is high. The presence of factor 5 leiden and prothrombin G2021A gene heterozygote combination variations increases the risk of venous thrombosis. In our patient, jejunostomy is planned due to the presence of a 70 cm intestinal loop and ileocecal valve.

As a result; MVTs are seen in 10%-15% of all mesenteric ischemia. Due to the MVT-induced mesenteric ischemia, we should perform limited resection. Secondary operations should be performed in a controlled way and we might consider that heterozygote factor V leiden, prothrombin G20210A and homozygote methylenetetra-hydrofolate reductase C677T might be in the etiology. We believe that it is important to determine the hereditary risks.

**Keywords:** Mesenteric vein thrombosis, mesenteric ischemia, gene

## PP-0425 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] A Rare Mass of Small Intestine “ Solitary Ganglioneuroma ”

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Ganglioneuroma forms a subgroup of peripheral neurogenic tumors; it is defined as the tumor originating from neural crest and developing from neuroectodermal cells. It is divided into three subgroups as peripheral neurogenic tumors, neuroblastoma, ganglioneuroblastoma and ganglioneuroma according to the degree of neuroblastic differentiation, type, malignancy potential and schwann stroma development. Among these, ganglioneuroma is benign, often originating from sympathetic ganglion cells or adrenal medulla cells, rare, slow-growing tumors. Histologically, they are formed from ganglion cells, consisting schwann cells and fibrosis tissue. Although the most common sites have been reported as posterior mediastinum and retroperitoneal area, it is located at adrenal glands at 21%. Although rarely, it might also be seen in the mediastinum and retroperitoneal region at the same time, or in the parapharyngeal area, bone, gastrointestinal tract, supraclavicular region. In general, it is seen in the child age group and 2/3 of the cases are under 20 years old. Because of its slow growth, it is usually diagnosed in late adolescent ages; the symptoms usually result from the compression of the tumor on the surrounding tissue. Clinical findings such as chronic cough and shortness of breath can be seen. Neural compression, dorsal spinal scoliosis, although rarely increased secretion of catecholamine due to secretory activity and metabolic problems may also be encountered.

Intestinal ganglioneuromas are rare, benign neoplastic lesions characterized by specific pathological findings. In some patients, solitary lesions such as colonic polyps may be observed and in some, it may appear as multiple polyposis called ganglioneuromatosis in the colon and terminal ileum. In some patients, an increase in wall thickness can be seen as the infiltration of intestinal ganglioneuromatosis cells in the bowel wall and proliferation in myenteric plexus. Intestinal ganglioneuromatosis is mostly seen in the colon, terminal ileum and appendix in the intestinal system.

As a result of advanced tests, we present a patient whose pathology was reported as ileal ganglioneuroma and had right colectomy including the terminal ileum and who had a mass lesion located in the terminal ileum cecum and who was evaluated with abdominal pain and constipation.

**Keywords:** Intestinal ganglioneuroma, neurogenic tumor ileum

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## PP-0426 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] A Friend That We Should Be Cautious Of: Persimmon

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Bezoars are the formations of non-digestible organic substance league in the gastrointestinal system. It is often seen in the stomach and small intestine. Depending on the variety of these non-digestible organic substances, there can be different varieties. Phytobezoar of plant origin; trichobezoar, especially in patients with psychiatric problems due to hair and hair eating habits; Pharmacobezoar due to the medication and those formed as a result of the milk powder used are called lactobezoar. Phytobezoars are the most common types of bezoar and in our country, foods that have high proportion of non-digestible fiber such as raisins, squash, leek, beet and Persimmon, also known as Trabzon hurması in our country, play an active role. Although the homeland of the persimmon is known as Far-East, it grows in Trabzon and Hatay in our country. Shibutal, which is abundant in raw and wild dates, is also a kind of wild date itself, is found in large amounts in persimmon. This substance becomes a gelatinous material which is difficult to dissolve when it reacts with gastric acid and causes a transition problem in the passage. The presence of previous gastric surgery and the presence of diseases causing gastroparesis are important risk factors for the formation of bezoars. It may be asymptomatic bezoars coincidentally detected during endoscopy. They can also cause life-threatening complications such as obstruction, perforation and bleeding. Treatment options include conservative methods such as endoscopic fragmentation and enzymatic thawing, but it usually requires surgical intervention. We present a 44-year-old male patient who presented to our unit with complaints of epigastric pain, nausea and vomiting 24 hours after eating about 1 kg of persimmon. Although it is a source of vitamin, mineral and antioxidant agent as well as cardiovascular, gastrointestinal and immune system friendly; we aimed to draw attention to the unfavorable situations that can be caused by the reckless consumption of persimmon. Our patient is a 44-year-old male patient with no history of additional disease and surgery. He was admitted to our unit with complaints of epigastric pain, nausea and vomiting. In the patient's history, he had a history of eating persimmon 24 hours before on an empty stomach. The patient was taken to the endoscopy unit and was given fluid-electrolyte treatment and tried to be treated conservatively after a nasogastric catheter had been inserted. Since he was non-responsive to these methods, he was taken into the endoscopy unit. Endoscopy revealed giant phytobezoar in the stomach that caused ulceration in the stomach. Afterwards, the patient was taken into operation and gastrotomy was

performed. After removing the bezoars, the stomach wall was repaired primarily. The patient was discharged with healing in the postoperative period. Therefore, although persimmon has many benefits; it shouldn't be forgotten that it can form bezoars which can cause serious problems if consumed in excessive amounts and raw.

**Keywords:** Bezoar, intestinal obstruction, persimmon

## PP-0427 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Gossipiboma (Restricted Internal Fistula)

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**Introduction:** Gossipiboma is a foreign body reaction that develops from cotton material that is forgotten in the abdomen in surgical operations. It is one of the most medicolegally feared situation for surgeons. After the surgery, even the idea of forgotten foreign material is enough to disturb the surgeons. After abdominal operations, it can be seen in the range of 1/3000 to 1/5000. Considering the cases that are not reported due to legal problems, it would not be wrong to claim that these rates are higher. Although it can be seen in almost all major surgery branches, it is most commonly seen after general surgical operations. The most common foreign body which causes gossipiboma is the surgical tampon. Emergency surgery, obese patient, team change during surgery, prolongation of operation time increases the risk of gossipiboma.

**Case:** A 73-year-old male had been treated with Roux-en-Y anastomosis 6 months ago after total gastrectomy for gastric cancer. He presented himself to our outpatient unit due to intermittent abdominal pain, weight loss, anorexia and palpable stiffness in the left side of the abdomen. In the described area in USG, a hyperechoic shading appearance with a 47 mm diameter in posterior was detected and CT control was requested. CT was interpreted as a 4 \* 3 cm diameter area with air densities and tubular foreign body density. The patient was planned for elective surgery due to gossipiboma.

In the laparotomy of the patient, it was observed that foreign body was surrounded by 3 intestine loops 20 cm distal from the 'Y' leg of the Roux-en-Y anastomosis and 50 cm from the intestine. When the lodge was opened, it was seen that 2 distal intestinal loops had lodge fistulas with surgical tampon. Although the proximal part didn't have a fistula, ulceration and inflammation was present in the 10 cm area. In the unprotected proximal part and distal, anastomosis was performed and jejunum loops with fistulas were resected from 2 locations in 50 cm area. Postoperatively, the patient was started on a diet on the 4th day and was discharged after 7 days without any problem. During his 24-month follow-up, no problem was experienced in terms of gastric cancer and gossipiboma.

**Conclusion:** General surgical operations are more risky in terms of gossipiboma due to the high number of emergency interventions, long-term operations and the anatomical structure of the intraperitoneal cavity. The most common symptoms are pain, palpable mass in the abdomine, abscess and ileus. In the diagnosis, many radiological examinations can be used. Radiopaque-labeled tampons and pads are easy to detect peroperatively or postoperatively, but it may still be difficult to diagnose for non-radiopaque pads that are still in use. Gossipiboma can be confused with cases such as tumor, complicated hematoma and hydatid cyst. Gossipiboma should definitely be considered in the differential diagnosis in patients with a history of previous surgery. Gossipiboma is an undesirable but avoidable condition. The main problem is how to avoid the problem rather than how to treat it. If detected, appropriate surgery should be performed as soon as possible to prevent mortality and morbidity.

**Keywords:** Gossipiboma, foreign body, internal fistula

## PP-0428 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] The Effect of Vacuum-Assisted Closure (VAC) Application in Intraabdominal Sepsis on the Apache IV Score, Mannheim Peritonitis Index and Sofa Score

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**Objective:** Vacuum-Assisted Closure (VAC) application is an open abdominal relaparotomy method used in intraabdominal sepsis since the late 1990s. This retrospective study was planned to evaluate the effect of VAC on apache IV score, Mannheim peritonitis index and sofa score.

**Material and Methods:** The data from the hospital database of 159 patients who underwent VAC between April 2010 and January 2017 were documented and their apache IV score, manheim peritonitis index and sofa (Sequential Organ Failure Assessment Score) scores were found. VAC changes of the patients were performed every 72 hours and the data in the 1st, 2nd, 3rd, and 4th changes were documented. Patients who underwent VAC due to necrotizing fasciitis and Fournier's gangrene were excluded from the study. ANOVA analysis was performed in repetitive measurements in order to determine changes in apache IV score, manheim peritonitis index and sofa scores.  $P < 0.05$  was considered statistically significant. The analyses were performed with NCSS 11 (Number Cruncher Statistical System, 2017 Statistical Software) program.

**Results:** It has been found that VAC change has a decreasing effect on the values of apache IV score. It was determined that there was a significant difference between the 1st and 3rd changes ( $p=0.0001$ ), between the 1st and 4th changes ( $p=0.0001$ ), between the 2nd and 3rd changes ( $p=0.0001$ ), between the 2nd and the 4th changes ( $p=0.0001$ ) and between the 3rd and 4th changes ( $p=0.0001$ ). VAC changes have been found to have a decreasing effect on manheim peritonitis index measurement values. It was determined that there was a significant difference between the 1st and 2nd changes ( $p=0.0001$ ), between the 1st and 3rd changes ( $p=0.0001$ ), between the 1st and 4th changes ( $p=0.0001$ ), between the 2nd 3rd changes ( $p=0.0001$ ), between the 2nd and 4th changes ( $p=0.0001$ ), and between the 3rd and 4th changes ( $p=0.0001$ ). When the effect of VAC change on sofa values was examined, it was determined that there was a significant difference between the 1st and 3rd changes ( $p=0.0001$ ), between the 1st and 4th changes ( $p=0.0001$ ), between the 2nd and 3rd changes ( $p=0.0001$ ) and between the 2nd and 4th change ( $p=0.0001$ ), There was no significant difference between the 1st and 2nd changes ( $p=1,00$ ), and between the 3rd and 4th changes ( $p=0,079$ ). Although there was no significant difference between the 1st and the 2nd changes and between the 3rd and 4th change, it was determined that there was a decrease in time compared to the average of the measurement values. However, this change was not statistically significant.

**Conclusion:** The positive effect of VAC application on apache IV score and manheim peritonitis index was determined but no positive effect on sofa score was determined. In order to fight sepsis, long-term VAC should not be continued.

**Keywords:** VAC application, apache IV score, manheim peritonitis index, sofa score.

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## PP-0429 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Giant Hiatal Hernia Associated with Gastric Schwannom

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A 72-year-old female patient was known to have a history of operation due to HT and endometrium CA. Her complaints were dyspepsia, pyrosis, and shortness of breath. Her hydro CT showed a smooth, homogeneous well-circumscribed lesion present in the stomach corpus with a 3.5x5 cm leiomyoma. Her contrasted CT revealed a homogenous mass formation in leiomyoma-style benign nature with a size of 28x38 mm with subserous location in the hiatal hernias and large curvature of the stomach. According to the MRI, gastric sliding type hiatal hernia and leiomyoma forming area were present. In the Pet-CT, intense FDG uptake (suv max: 9,2) was first evaluated in favor of inflammatory processes (gastritis?) and, if necessary, endoscopic examination would be appropriate. According to the esophageal passage graph, a 3.5x5 cm filling defect was present in the stomach corpus. TM markers (CEA, CA 19-9 and CA-125) were in normal limits. As for surgery, laparoscopic nissen fundoplication + stomach wedge resection were performed. The patient was started water on the postoperative 2<sup>nd</sup> day. On the 4<sup>th</sup> postoperative day, the patient was started on a normal regimen. She was discharged on the 6<sup>th</sup> postoperative day. According to the pathology, 4x4x3.5 cm in size spindle cell mesenchymal tumor was evaluated as schwannom.

**Keywords:** In the stomach, schwannom, Hiatal hernia

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## PP-0430 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Crohn's Disease with Atypical (Jejunum) Located Causing Massive GIS Bleeding (Case Report)

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Crohn's disease is an inflammatory bowel disease characterized by granulomatous inflammation whose etiology is unclear, which can hold any region in the gastrointestinal tract from oral to anus. The aim of this study was to present a case of Crohn's disease with jejunum located causing massive gastrointestinal bleeding.

A 64-year-old male patient who had had diarrhea and gastroenteritis for one month in the infectious diseases department, underwent gastroscopy and colonoscopy during the follow-up period and no pathological findings were observed. During this period, the patient was operated because of the suspicion of ileal invagination disease in his tomography and he was evaluated to have no invagination during the operation. He then was referred to the department of infectious diseases of our hospital. During the follow-up and treatment period, the patient was consulted by our clinic because of the development of abundant GIS bleeding. The patient with severe hematoecesia had hypotension (70-30mm/hg) and tachycardia (120v/min). The complete blood analysis was Hb: 5 g/dl, Htc: 18. In the intensive care unit of our department, gastroscopy was performed under emergency conditions, there was plenty of blood in the stomach and aspiration was detected, but hemorrhage focus could not be detected. In spite of the resuscitation and replacement, the patient's emergency operation was decided for the patient who had no improvement in his clinic, hemodynamics and laboratory values. Exploration revealed blood in the entire gastrointestinal tract and seroseal edema was present from the treitz ligament at the level of the jejunum. Jejunotomy was performed and endoscopic examination was performed from this area distally and proximally with the help of gastroscope. In the examination, it was seen that all of the jejunal mucosa were hyperemic and granular, there was leakage like active bleeding from all of the mucosa and multiple biopsies were taken. Empirical steroid treatment was started in the early postoperative period. The patient was started on empiric steroid treatment and his bleeding stopped during follow-up, and the necessary treatment was started since the pathology was consistent with inflammatory bowel disease. The patient was discharged with medical treatment.

Patients with Crohn's disease usually present with symptoms such as abdominal pain, diarrhea, fatigue, fever, and weight loss, but although rarely they might also have GIS bleeding. In order for diagnosis, biopsies accompanied by endoscopy along with clinical evaluation are helpful. Medical treatment is the first choice. Although very rare, patients can be diagnosed during the operation as it happened in our case.

**Keywords:** Crohn, GIS bleeding, Inflammatory bowel disease

## PP-0431 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] A Rare Cause of Ileus in Adults: Midgut Volvulus

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Intestinal malrotation is more common in the neonatal period. It is seen in 0.2% of adults. This patient group is a unique problem for surgeons in terms of both diagnosis and treatment.

In this case report, we have presented an adult patient with midgut malrotation who applied to the emergency department of our hospital and our approach to this patient. 51 year old patient with no history of any known systemic disease and previous abdominal surgery, was admitted to our emergency department with complaints of extensive abdominal pain, distension, nausea and vomiting. The patient had no history of trauma and no history of travel. The patient had no weight loss and didn't describe any changes in defecation habits.

The patient stated that when he had too much food, he usually experienced similar complaints.

On his physical examination, the patient was afebrile and hemodynamically stable. Abdominal distension was present and palpation showed diffuse tenderness. Normal colored stool was observed in rectal examination. No mass lesion was palpated. His hemogram examination showed wbc: 18,700/ul lipase: 134 U/L above normal values. Apart from these, hemogram and biochemistry laboratory test results were within normal limits. Standing direct abdominal radiographs showed air fluid levels at the small intestine level that were mostly localized in the right upper quadrant.

Abdominal CT: The duodenum was located in the 3rd part of the SMA anterior. Duodenum and proximal jejunum loops ended suddenly at the level of iliac bifurcation. The formations in the proximal of this area were dilated and the distal of the small intestine and colon loops were collapsed. At the deepest part among the intestinal loops, free fluid up to 1.5 cm was observed.

Patient's oral was closed. IV hydration was started with 0.9% NaCl. A nasogastric catheter was inserted and a normal gastric content of 100 cc was observed. The patient was informed about the operation and was prepared for the operation. Treitz's Ligament was not available in the exploration. It was observed that the small intestinal loops were completely under the Ladd's band in a mass-like manner in the upper right-middle quadrant. This band extending from the duodenum to the cecum was removed. It was observed that the small bowel loops that herniated to this area were dilated. No necrosis was detected. No resection was needed. Right colon was released. Appendectomy was performed. The right colon was taken on the left colon and fixed to the abdominal wall with silk sutures. Operation was terminated. In our case, duodenojejunal junction was on the right of the vertebral column in abdominal CT which was compatible with the literature. The clockwise malrotation of the mesentery root and the location of vascular structures, bowel pathologies were presented in detail. It was significant that our case was an adult with the rotation of the 270-degree mesenteric meso and without necrosis findings. In patients with non-specific abdominal complaints, the possibility of malrotation should not be underestimated.

**Keywords:** Ileus, malrotation, midgut

PP-0432 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## Laparoscopic Minimally Invasive Surgery for Early Gastric Outlet Obstruction After Corrosive Agent Ingestion; Case Report

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**Introduction:** Here, we present a case of laparoscopic gastroplasty applied to the patient who developed early gastric outlet obstruction after the intake of corrosive material.

**Case:** A 41-year-old male patient had an exposure of corrosive substance by accidentally drinking two sips of hydrochloric acid (15% HCL) at home. Afterwards, it was learned that he tried to relax by drinking milk, yogurt and vomiting. He was admitted to the emergency room 10 hours after the exposure. He did not have any positive findings except for oropharyngeal hyperemia in his clinic and there was nothing significant in his abdominal examination and imaging. The patient was hospitalized in our gastroenterology unit. After 24 hours, in his gastroscopy widespread exudate ulcers were detected in the distal esophageal. The patient, who tolerated oral intake on the 3rd day of his hospitalization, was discharged. The control gastroscopy performed on the 10th day of his exposure revealed that the ulcers on the esophagus were healed; an ulcer that almost completely obstructed the lumen in the antrum was detected. A gastroscopy was performed in the patient who presented to our hospital with nausea and vomiting 20 days after his discharge: Stenosis that hardly let the passing of the scope through the gastric outlet was observed. Repeated dilatations were performed with a 20-mm balloon. The patient was scheduled for operation in General Surgery unit due to vomiting after oral intake. In the laparoscopic exploration, the abdomen was cannulated and it was observed that fibrosis stenosis that was obstructing the lumen in prepiloric antrum. Intraoperative gastroscopy was performed. The stenosis of the prepiloric antrum was observed with the scope, but the distal part could not be passed. Suspender sutures were placed in the upper and lower part of the stenosis on the anterior surface of the stomach and a 5-cm gastrotomy was performed in the horizontal plane and fibrous stenosis was opened. Scope was taken distally from the proximal stomach with a laparoscopic grasper. In the gastroscopy that was completed via laparoscopic aid, gastrotomy was closed in the vertical plan following the observation that the passage was open. The patient who had started taking the regimen on the 1st postoperative day was discharged on the 6th day without any problems.

**Conclusion:** Corrosive substances cause different tissue damage depending on being acid or alkaline. The esophagogastroduodenoscopy is of great importance when evaluating the damage. It is thought that liquids such as water and milk, which are drunk for the purposes of dilution or neutralization after the intake of the corrosive substance can facilitate vomiting or increase heat by acid-alkaline reaction and increase esophageal damage. It was thought that the damage to the esophagus was more evident in our patient due to drinking milk and yogurt and vomiting with the help of the finger. The most common complication of corrosive substance ingestion is esophageal stenosis. Gastric complications are the most common late period occurrence of gastric outlet obstruction. In our case, gastric outlet obstruction developed in the early period. The most common treatment modality is periodic dilatation in patients who experience stenosis. The rate of success of dilatation in the literature is 60-80%. In our case, surgical intervention was planned for the patient who was not responsive to repeated dilatations.

We believe that the application of intraoperative gastroscopy for the evaluation of the passage and the lumen in the distal of stenosis in benign cases with gastric outlet obstruction due to corrosive uptake is possible to increase the feasibility of minimally invasive methods and decrease possible postoperative complications. We conclude that laparoscopic gastroplasty as a minimally invasive surgery is a viable method in the treatment of gastric outlet obstruction after corrosive substance intake.

**Keywords:** Corrosive agent, gastric outlet obstruction, minimally invasive surgery

PP-0433 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## Conservative Follow-up in Rare Distal Esophageal Microperforation After Endoscopy

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In the last two decades, endoscopic interventions for diagnostic and therapeutic purposes have been widely used in out-patient and inpatient gastroenterology units. Upper gastrointestinal endoscopy is a very reliable procedure, with an overall complication rate of 0.1% and a mortality rate of less than 0.05%. However, esophageal perforation is an important complication of upper GIS endoscopy. Our case was a 78-year-old male patient who had been having dysphagia and vomiting in the last year. Lately, he couldn't eat solid food but only liquid food. After 6 months of vomiting 3 hours later after eating and even drinking water and weight loss of up to 20 kg, he presented himself to gastroenterology unit of our hospital. In his history, it was learned that he had previously undergone balloon dilatation for esophagus. Upon the diagnosis of achalasia-compatible mass was detected on barium X-ray and upper endoscopy, he was started to be followed up. The patient's previous GIS endoscopy had revealed tertiary peristalsis, with the suspicion of achalasia, severe stenosis of the distal esophagus and proximal enlargement were observed. After the balloon dilatation, control endoscopy showed cardia edematous, mucosa at the distal esophagus was observed irregularly and biopsies were taken. Endoscopy was planned for re-control and dilation with spark plug was performed. Since it was a minimal laceration area, it was transferred to our general surgery unit. After the patient was admitted to the ward, an esophageal microperforation was observed in the PA AC and all abdomen + thorax CT. The conservative approach to esophageal perforation was well defined and an algorithm was established. Treatment is planned according to the etiology of non-perforating esophageal injuries and surgery is performed if the underlying disease requires one. Conservative treatment has a very specific selection criteria and can be applied to these patients. These criteria are early diagnosis, stable patient, minimal injury and minimal pleural or mediastinal contamination. Conservative treatment includes patient stabilization 48 hours after injury, total parenteral nutrition (TPN) and at least 7 days of broad-spectrum antibiotic treatment. As the general condition of the patient was good, conservative treatment and follow-up was decided in our case. After 7 days of follow-up, the patient was discharged with cure.

**Keywords:** Conservative, esophagus, perforation, follow-up

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## PP-0434 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Clinical Approach in Giant Retroperitoneal Dedifferentiated Liposarcoma: A Case Report

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Retroperitoneal sarcomas are rare tumors that constitute 15% of soft tissue sarcomas. The most common type of liposarcoma is 0.1% to 0.2% of all malignant tumors. There are 4 histologically different types: well-differentiated liposarcoma, dedifferentiated liposarcoma, myxoid cell liposarcoma and pleomorphic liposarcoma. Dedifferentiated liposarcoma and pleomorphic liposarcoma have worse prognosis and higher risk of metastasis. Well-differentiated liposarcomas have a good prognosis and the risk of metastasis and recurrence is very low. However, the risk of recurrence and metastasis is known to be high in dedifferentiated liposarcomas. In patients with dedifferentiated liposarcoma, local recurrence rate is 41% and metastasis rate is 17%. In our case, the pathology result was reported as dedifferentiated liposarcoma. They are mostly seen in the fifth decade of life. However, our case was 82 years old. Most of the patients with retroperitoneal sarcoma present with complaints of abdominal mass. Our patient complained of abdominal pain, but the main complaint was abdominal swelling. CT and MRI in the diagnosis of tumor size, location, spread and vascular structures are helpful in terms of their relationship with the vascular structures. And the treatment is the excision of the tumor. The mass of our patient was retroperitoneal and was 275x165x275 mm in size. The reason we present this case is that our patient presented himself due to abdominal swelling rather than pain and although the mass was 60x30cm in size and reached almost 10 kg with high risk of metastasis, no metastasis was observed.

**Keywords:** Dedifferentiated, liposarcoma, retroperitoneal

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## PP-0435 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Our Surgical Experience in Patients with Stomach Cancer

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**Objective:** Stomach cancer is a common type of cancer in the world. Although it used to be one of the most common causes of deaths due to cancer, mortality has been relatively reduced due to the development of early diagnosis and treatment methods. In this study, we aimed to present our 7 years of experience retrospectively in gastric carcinoma which is seen in a considerable amount in the community.

**Material and Methods:** We retrospectively evaluated 194 patients who were operated due to gastric cancer diagnosis in Selcuk University Medical Faculty Hospital between 2010 and 2017.

**Results:** There were 71 female and 123 male patients diagnosed with gastric cancer. 27 patients were excluded since they were inoperable. The average age of the patients was 73.6 (34-93) years. 95 patients underwent open total gastrectomy +R&Y esophagojejunostomy, open distal subtotal gastrectomy +R&Y gastrojejunostomy were performed on 58 patients, and laparoscopic subtotal gastrectomy +R&Y gastrojejunostomy operations were performed on 14 patients. As for tumor localizations: 38 cardia; 3 cardia-fundus; 22 fundus-corporis; 59 corpus; 9 corpus-antrum; 24 antrum; 9 antrum-pylorus; 3 pilor located masses were present. In the postoperative pathology of the specimen 50.9% of the cases had perineural and 48.5% of them had vascular invasion. While the average number of removed lymph node was 22,3, 62% of them were non-metastatic and 38% of them were evaluated as metastatic. When the depth of invasion of the tumor is examined; mucosa in 34 patients, submucosa in 15 patients, muscularis mucosa in 1, muscularis propria in 22, subserosa in 39 patients, serosa in 55 patients and tumor invasion beyond serosa in 1 patient. The average follow-up period was 1.8 years (6 months-7 years). In the postoperative early period, a total of 10 patients were lost: 4 patients died of pulmonary embolism, 3 patients with anastomosis leakage, 1 patient with sepsis and 2 with sudden cardiac arrest. Recurrence was detected in 7 patients during endoscopic follow-up. In 10 patients, a diagnosis of recurrence was made by abdominal CT. Of the 17 patients who had recurrence, 3 were stage I, 7 were stage II and 10 were stage III. Two of 17 patients with subtotal gastrectomy who developed recurrence were re-operated and gastrectomy total were completed. Fifteen patients were referred to medical oncologic treatment since they were inoperable.

**Conclusion:** Gastric cancer is now one of the most common cancers. It is used successfully with laparoscopic or open surgical techniques for patients who are suitable for surgical treatment. With the optimization of surgical procedures applied today, postoperative mortality rates have decreased from 14% to 6%. Local recurrence is reported as 5-10% in stage I disease, 25-30% in stage II disease and 50% in stage III disease. Therefore, the earlier the patients' surgery is applied, the more curative the result is. In our 7-year experience, our mortality rate was 5.9% and our recurrence rate was 10.1%. Current results support literature data; more meaningful results will be obtained with long-term follow-up.

**Keywords:** Gastric cancer, total gastrectomy, distal subtotal gastrectomy, laparoscopic gastrectomy

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## PP-0436 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Evaluation of Esophagogastric Anastomoses and Leaks in Esophageal Cancer

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**Objective:** Esophagogastric anastomosis leakage is a common complication following esophageal cancer operations. Nowadays, studies are continuing to reduce this problem with improvements in preoperative support, anastomosis techniques and materials. In this study, we aimed to present anastomosis leaks and their results in patients who underwent esophagectomy for esophageal cancer in our clinic for the last five years.

**Material and Methods:** The demographic characteristics, tumor location, surgical methods, postoperative anastomotic leakage rates and pathology results of the patients who underwent esophagectomy due to esophageal cancer in the last five years were examined.

**Results:** The results of 60 patients who had been included in our study were evaluated retrospectively. 25 of the patients were female and 35 were male and the average age was 56.2. Thirty-three patients underwent only transhiatal approach, 18 patients underwent thoracotomy and 4 patients underwent esophagectomy with thoracoscopy. Four patients underwent faringolarin-goesophagectomy. 50 patients underwent total esophagectomy and 10 patients underwent subtotal esophagectomy. All patients who underwent total esophagectomy underwent manual cervical anastomosis. Thoracic anastomosis was performed in all patients who underwent subtotal esophagectomy and these anastomoses were performed with stapler. The tumor was distal in 25 patients, cardio-esophageal in 17 patients, mid-esophageal in 14 patients and cervical localization in 4 patients. Pathology results revealed squamous cell carcinoma in 41 patients and adenocarcinoma in 19 patients. Anastomosis leakage occurred in 12 patients, 9 of which had cervical and 3 thoracic anastomosis. Endoscopic stenting was performed in 2 of the patients who developed cervical anastomosis leakage. In four patients with leakage, anastomotic stenosis developed in the late period including 3 cervical and 1 thoracic. Preoperative parenteral nutrition support was provided to 13 patients. One of these patients developed anastomosis leakage which was located in the cervical region. 2 patients with anastomosis leak died within the first postoperative month. Both of these were thoracic localized.

**Conclusion:** 33% of thoracic anastomosis and 18% of cervical anastomoses were found to have leaks. It was observed that leakage rate was more frequent for thoracic anastomosis than cervical anastomosis and more mortal. Preoperative parenteral nutritional support significantly reduced the rate of anastomotic leakage.

**Keywords:** Esophagogastric anastomosis, esophageal cancer, leak, parenteral nutrition

## PP-0437 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## Preoperative Planning: A Comprehensive Approach to Oncologic Gastric Surgery with 3D Personal Models

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**Objective:** In gastric tumor surgery, fatal complications resulting from the injuries of aorta abdominalis, truncus coeliacus, vena porta, arteria mesenterica superior and vena mesenterica superior vessels. In oncological operations more information is required regarding vascular, tumoral and organoanatomic structures. Treatment protocol of gastric tumors change depending on the attitude and location of the tumor. It was aimed to minimize the risk of intraoperative vascular injury and let the surgeon determine their surgical method in the preoperative period through the formation of the 3D organotumoral surgical models of patients.

**Material and Methods:** Through 3D and then DICOM modeling software of the gastric tumoral tissue and vascular structures of the stomach with computed tomography imaging of 10 patients with different localized gastric tumors, models from tumoral tissue, portal veins, stomach and mesenteric vessels-from were established.

**Results:** 3D modeling of tumoral formations in different regions of the stomach was performed. The relationship between the geometric changes and the vascular structures of the organ was easily established through different angles of gastric tumor in 10 patients. In these models, the region where each tumor is located in the organ, its range, tumor nutrition and vascular structure, proximity to vascular structures and varying anatomy possibility was investigated. Tumor dimensions, placement in the stomach, spreading features, topographic relations with arteries and veins with close proximity were studied on 3D models. Each of these features was used as intraoperative reference. The patient was operated later and the tumor mass was removed. The operation time was shorter and more comfortable and no hemorrhage and complications were observed in the postoperative period.

**Conclusion:** Forming the individual patient models help to evaluate the shape, character of spread, the arterial feeding properties of the tumor and the geometric change the tumor created in the organ. 3D stomach tumor models might also be used in new approaches in surgery, innovative operation strategies and preoperative planning. Preoperative surgical team preparation is very effective and useful models in terms of the equipment to be used and informing the patient.

**Keywords:** 3D, 3-dimensional model, gastric cancer

## PP-0438 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## The Effect of Enteral Immuno-Nutrition in Upper Gastrointestinal Cancer Surgery: A Prospective Study

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**Objective:** Enteral nutrition and immuno-ionosis are performed surgically and have positive consequences on malignant patients. Different results were obtained with the combined use of both diets. In this prospective study, we aimed to evaluate the effect of perioperatively applied enteral immunonutrition on the results of gastrointestinal cancer surgery.

**Material and Methods:** 41 patients who underwent upper gastrointestinal cancer surgery between January 2012 and March 2013 were included in the study. Patients with distal esophagus, stomach and pancreatic cancer, and patients with moderate to severe malnutrition due to operable and malignancy were included in the study groups. The subjects were randomized according to two different nutritional regimens: only enteral (EN, n=20) and enteral and immuno-nutrition (ENIN, n=21). Both nutritional regimens were administered by oral or nasogastric (NG) catheter 7 days before and after the operation (perioperative) and in the postoperative period by feeding jejunostomy or NG catheter. Nutritional parameters (serum albumin, prealbumin, transferrin), postoperative morbidity, mortality and duration of hospital stay were statistically compared.

**Results:** There were no significant differences between the groups in terms of basic parameters and demographic characteristics. Serum prealbumin levels were significantly higher in immunonutrition group (ENIN) (p=0.033). In the ENIN group, postoperative infection (p=0.021) and anastomotic leakage rates (p=0.018) were found to be statistically low compared to the EN group.

The duration of hospitalization was longer in EN patients compared to ENIN group (18/12 days,  $p=0.032$ ). Both groups were similar in terms of total morbidity and mortality rates ( $p>0.05$ ).

**Conclusion:** Owing to some positive effects, immunonutrition and enteral nutrition as are shown in the literature, are used in surgical practice and malignant diseases increasingly. There are studies showing that there is positive or no effect on the use of immuno-nutrition in the malignancy surgery. In this prospective study, the perioperative use of enteral immunonutrition has been found to have a significant positive effect on the rates of infectious complications and anastomotic leakage and hospital stay. We think that the positive effects of immunonutrition result from determining the malnutrition level in the preoperative period and applying it at least 7 days preoperatively.

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**Keywords:** Nutrition, immune nutrition, surgical procedures, cancer

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## PP-0439 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Disseminated Gastrointestinal Stromal Tumor: A Case Report

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**Introduction:** Gastrointestinal stromal tumors (GIST) constitute 0.1-3% of all gastrointestinal tumors. These tumors originating from the interstitial Cajal cells located in the myenteric plexus in the gastrointestinal tract and regulating peristalsis show themselves with nonspecific clinical findings. In this report, we present a case of multiple gastrointestinal stromal tumors with clinical findings of neurofibromatosis.

**Case:** A 50-year-old male patient presented with right upper quadrant pain and diarrhea for 1 week. His medical history revealed only an ulcer perforation 10 years ago. In her family history, it was learned that her father died due to an unknown malignancy and that her two daughters had been operated for ovarian dermoid cyst. Physical examination revealed pathological findings such as cafe au lait-like spots on the hands, feet and axilla, and a palpable mass on the right upper and lower quadrant. When his family history was re-examined after physical examination, it was learned that the skin lesions were present in 1 of his 4 sisters and his 3 daughters. In the contrasted abdomen computed tomography, a 10x10 cm lesion that was thought to be associated with the small intestine in the right quadrant of the abdomen and in the pelvic area, a heterogeneous mass lesion of 7.5x6 cm was detected in the posterior neighborhood of the bladder. Upper gastrointestinal system endoscopy revealed a 2.5 cm in size submucosal mass which could be compatible with GIST in the right colon. The patient was scheduled for definitive diagnosis and treatment. The patient was operated following the necessary preoperative preparation and patient consent. In the exploration, at least 100 tumoral mass of 0.3 cm to 10 cm, mostly on the antimesenteric face originating from the stomach fundus and extending to the right colon, originating from the serosa were observed. There were at least 100 tumoral masses at 2-3 cm intervals. The largest diameter lesions were removed for diagnostic and therapeutic purposes. The frozen result of the extracted masses was reported to be compatible with the mesenchymal tumor. The operation was terminated because the tumors were very extensive and curative operation could not be performed. The pathologic examination revealed that the removed tumors were mixed type, moderate risk, low grade gastrointestinal stromal tumor with mitotic index below 5. The patient was followed-up with imatinib--treatment after the operation.

**Conclusion:** Large and extensive gastrointestinal stromal tumors may present with large masses and widespread peritoneal spread at the time of diagnosis. In our case, the suspected peptic ulcer perforation history suggested that it was probably a stromal tumor perforation and then widely planted tumor in peritoneal surfaces. The main treatment principle of resectable GIST is complete tumor resection with negative surgical margins while imatinib is the main treatment regimen in unresectable GIST as in our patient. Cafe au lait spots that are seen in neurofibromatosis were also detected in our patient. In the literature, only a small number of patients were reported. It has been reported that various mutations in patients with neurofibromatosis may cause gastrointestinal tumor in these patients.

**Keywords:** Extensive gastrointestinal stromal tumor, gastrointestinal tumor, neurofibromatosis

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## PP-0440 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Esophagus Perforation due to Intubation

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**Introduction:** Esophageal perforations are rare, but the incidence of esophagus is increasing due to the number of invasive procedures regarding diagnosis and treatments on esophagus. Since esophageal perforation leads to mediastinal and/or pleural inflammation and infection, followed by sepsis, morbidity and mortality are high in these cases. In these cases, it is important to diagnose and start treatment within the first 24 hours for good survival. In these cases, mortality increases up to 2 times. The patient was operated at an external center because of the septum deviation. We presented this patient who underwent surgery in the upper part of esophagus and was treated surgically.

**Case:** A 43-year-old female patient had a history of total thyroidectomy that happened 3 years ago and a diagnosis of diabetes mellitus for 5 years. She underwent operation by ear-nose-throat surgery unit with the diagnosis of septum deviation at the external center. During the operation, low saturation and subcutaneous emphysema in the upper extremities were observed. While the patient was being followed up in the postoperative anesthesia intensive care unit, the patient was observed to have fever, tachycardia and hypotension. Upon this, a 2.5 cm esophageal perforation was observed at the posterior of the proximal esophagus. The patient was then transferred to our hospital and taken into operation. In addition to the perforation area in the cervical exploration, a material compatible with the abscess in the mediastinal space along the esophagus was observed. The perforation area was closed with 4/0 polyglactin 910 sutures and the abscess content was aspirated by drainage administered to the mediastinal space. Hemovac drains were placed in the mediastinal cavity. In the postoperative period, the patient had the usual follow-up period of 11 days and the patient died due to the development of fungal sepsis.

**Conclusion:** Early diagnosis and treatment of esophageal perforations are life-saving. In these cases, adequate drainage should be provided and broad-spectrum antibiotherapy should be initiated to prevent mediastinitis, one of the most important causes of mortality. Diagnosis made before the development of mediastinal and pleural contamination increases the success of the treatment. Although we presented a multidisciplinary approach to the management of drainage and postoperative follow-up during the treatment of mediastinitis in our patient, we believe that the patient's history of total thyroidectomy and diabetes mellitus had a negative effect on postoperative recovery.

**Keywords:** Esophageal perforation, esophageal primary suture, difficult intubation, mediastinitis, total thyroidectomy

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## PP-0441 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Excision of The Mesenteric Cyst with Laparoscopic Jejunese Resection

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**Introduction:** Mesenteric cyst is a rare lesion. It has been claimed that it is seen 1 out of 100.000-150.000 hospitalization cases. The development of mesenteric cyst is not fully explained. Embryological development defect, clogging of lymphatic channels, degenerative change of lymph nodes and trauma are the main opinions proposed to explain the formation of such cysts. 2/3 of the cases occur in the small intestine and 1/4 in the large intestine mesentery. The ileum and sigmoid colon are the most common sites in which cysts occur. The clinical signs and symptoms of mesenteric cysts depend on the size of the cyst, the location and whether cyst complication develop or not. We presented a patient who had laparoscopic segmental jejunum resection because of the 8x6 cm mesenteric cyst detected in the jejunum meso.

**Case:** 58-year-old male patient had an inguinal hernia operation 17 years ago and had no additional disease. He was admitted to our department with abdominal distention and abdominal cramp that had been lasting for 4 days. On physical examination, no rebound and defenses and tenderness was detected in his abdomen. At the left inferiolateral of the umbilicus, a distension was palpable. Abdomen tomography revealed an appearance reported to be compatible with 6x8 cm sized mesentery cyst in the intestine mesentery at the jejunal loop level. Laparoscopy was planned. During the operation, a cystic structure was observed in the mesentery of the jejunum in the 50 cm distal of the treitz ligament. Segmental resection was performed due to the risk of the circulation of the related segment during the dissection and the segment was removed by mini laparotomy from the corresponding segment umbilicus. After anastomosis was performed on the remaining segments, the patient followed the postoperative routine. The pathology result was reported as Mesenteric cyst.

**Conclusion:** Although the incidence of mesenteric cysts is very rare, its treatment is possible by surgical method. Removal of the cyst (enucleation) is the preferred method without injuring the intestinal and mesenteric vessels. In some cases, the cyst is highly adherent to the intestine and allows the removal of the cyst by bowel resection, which should not be avoided. Because the results of draining the cyst or the external drainage of the cyst require a negative second attempt. In recent years, treatment with laparoscopy has been emphasized. In cases where a complete extraction of the cyst can be performed, the result is excellent. Recurrences usually occur in patients treated with partial cyst wall excision or removal of cyst contents. In our case, the

entire cyst was safely removed with the segment and the patient was discharged without any further intervention requiring a more invasive surgery, longer hospitalization and a higher risk of postoperative complications. We think that the cysts should be treated as laparoscopically as possible.

**Keywords:** Abdominal mass, jejunum resection, laparoscopic small bowel resection, Mesenteric cyst

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## PP-0442 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Laparoscopic Surgical Procedure in Gastric Tumors

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**Objective:** Gastric tumor operations that were used to be performed via open surgery for many years have been replaced by minimally invasive surgeries. In the beginning, this operation was applied only to patients with early gastric cancer and patients with more indication of distal gastrectomy, nowadays, it can be applied to all gastric cancer patients. The aim of this study is to evaluate the results of resection of gastric cancer patients who underwent laparoscopic surgery.

**Material and Methods:** This is a retrospective study of gastric cancer patients who underwent laparoscopic gastric resection in the General Surgery Unit in January 2017-December 2017. In this study, demographic characteristics of the patients, clinical features such as hospital stay and the pathologic features of the tumor were discussed.

**Results:** Laparoscopic surgery was performed in three patients diagnosed with gastric tumor in the General Surgery Unit between January 2017 and December 2017. All three of these patients were male. The first patient was 64 years old, the second patient was 65 and the third patient was 35 years old. Two of the patients had adenocarcinoma tumor and one was diagnosed with ring cell tumor. Pathology results were determined as T4aN3Mx, T3N1Mx, T3N2Mx. Negative surgical margins were reached in three patients after laparoscopic surgery. During the procedure, 5 ports were applied and in patients undergoing laparoscopic resection, the anastomoses were intracorporeal. The specimens were removed from the natural holes during the process. Furthermore, laparoscopic lymph node dissection was performed to the operated patients and 28, 26 and 44 lymph nodes were removed. The operation time of the patients was approximately 4.5-5 hours. The operation was completed without complications. In the post-operative period, the patients were started oral intake on the 4th and 5th days. All three patients adapted to oral feeding and did not develop any intolerance. Patients with normalized gastrointestinal activities were discharged within 7-10 days. There were no complications during post-operative period and hospitalization.

**Conclusion:** Laparoscopic surgical method for gastric cancer has become an increasingly preferred method. Although long operation time seems to be a disadvantage in laparoscopic gastric cancer surgery, it is thought that it will be preferred in gastric cancer patients considering the advantages such as comfort, decrease in post-operative wound site infection risk and shortening of hospitalization time.

**Keywords:** Laparoscopic surgery, stomach tumor, retrospective examination

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## PP-0443 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Treatment of Gastric Volvulus of Emergency Mesenteroaxial Type: A Case Report

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**Introduction:** Stomach volvulus is a condition that occurs more than 180 degrees of rotation of the stomach and is diagnosed more frequently than ever before with advanced imaging methods and requires surgery. We aimed to present a case who had undergone surgery for ulcer perforation three years ago and who had gastric volvulus of mesenteroaxial type.

**Case:** A 42-year-old male patient was admitted to our emergency surgery unit with complaints of abdominal pain, nausea and vomiting. He expressed that he was vomiting everything he consumed, along with his abdominal widespread tension and feeling of bloating. On physical examination, there was no feature except for abdominal tenderness. There was no feature other than a mild increase in blood values of leukocytosis (WBC: 12.300) and acute phase reactants (Crp: 22). Chest x-ray revealed gastric fundus air extending to the mediastinum. In the abdominal computed tomography, the stomach was highly dilated and the

appearance was compatible with gastric volvulus of the mesenteroaxial type. Left kidney was in the pelvis. In the gastroscopy, necrosis was detected in mesenteroaxial volvulus and mucosa but detorsion could not be performed. In the operation, mesenteroaxial volvulus was detected, detorsion was performed and gastropexy and hiatal hernia repair was performed. Peroperative gastroscopy revealed no complete necrosis in the gastric wall. The patient was discharged without any complication on the 10th day. There was no problem in the first postoperative control month.

**Conclusion:** Gastrointestinal intestinal volvulus is most commonly seen in the colon. Gastric volvulus is very rare clinical entity. These volvulus can be primary and secondary. The relaxation of ligamentous support structures of the stomach is thought to be the cause of volvulus. Stomach volvulus can be organoaxial, mesentereoaxial and mix. In our case, mesenteroaxial gastric volvulus was detected and detorsion was provided through surgery, gastropexy and hiatal hernia repair was performed. Gastric volvulus is rarely seen in surgical units and it is very difficult to diagnose since it doesn't have an imaging test or laboratory examination with a high level of diagnosis. It should be kept in mind that clinical suspicion, differential diagnosis and urgent surgical intervention are required.

**Keywords:** Stomach, volvulus, treatment

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## PP-0444 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Incidentally Detected Gastric GIST: A Case Report

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**Introduction:** GISTs are the most common mesenchymal tumors of the gastrointestinal tract. They account for the 1-3% of all gastrointestinal tract tumors. Lesions are frequently located in the stomach (66%) and small intestine (30%). It may present with bleeding, anemia, abdominal pain, swelling, and may also be completely asymptomatic and may be detected randomly in other examinations. Here, we present the management of the patient who was admitted to our emergency department with cholelithiasis and choledocholithiasis and was diagnosed with gastric GIST incidentally.

**Case:** A 68-year-old male patient was admitted to our emergency department with pain in the right upper quadrant. The patient whose complaints regressed via medical treatment was then referred to the general surgery outpatient unit with the diagnosis of cholelithiasis. Abdominal CT report was evaluated in our outpatient unit. Abdominal pain regressed and abdominal examination findings were normal. There was no additional feature other than a history of known nephrolithiasis. Liver function tests were within normal limits. Abdominal CT revealed a hydroptic appearance in the gallbladder, a 22 mm stone, a moderate expansion in the distal choledoch, and a blunt end, a nodular contrast enhancement of about 1 cm, which may have formed as exophytic from the stomach wall between the stomach and the left lobe of the liver at the level of the large curvature of the stomach. The patient's upper abdomen MRI and MRCP were planned as further investigation. MRI revealed cholelithiasis and choledocholithiasis, and a lesion that showed exophytic outlet from the stomach in size of 14x8 mm between the large stomach curvature and left liver lobe that might be compatible with gastric GIST. Tumor markers were within normal limits. Upper GIS endoscopy was performed and evaluated as usual. ERCP was performed and a stone was removed from the choledoch via EST and balloon. He was taken to the operation 1 week after ERCP. In laparoscopic exploration, there was a polypoid-exophytic irregular lesion with a diameter of about 1 cm in the corpus antrum junction at the anterior of the stomach. Laparoscopic wedge resection and simultaneous laparoscopic cholecystectomy were performed on the stomach. He was discharged on the fifth postoperative day. The pathology results were reported to be in the range of 15 mm in diameter, observed as 1-2 mitosis in the 50 magnification area, with benign surgical margins, and consistent with epithelioid GIST. No additional treatment was planned. The patient has been followed-up for 16-months without any disease.

**Conclusion:** GISTs are considered as potentially malignant mesenchymal tumors. Although GISTs for smaller than 2 cm and with no risk factors 6 month follow-up might be planned without any surgical intervention, for GISTs less than 2 cm, which has a risk factor due to border irregularity surgery should be scheduled. The ideal treatment for such small GISTs is laparoscopic wedge resection with robust surgical margins. In the presence of cholelithiasis, concurrent cholecystectomy might be added to the procedure.

**Keywords:** GIST, laparoscopic GIST, incidental GIST

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## PP-0445 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Non-Hodgkin's Lymphoma Causing Ileocecal Invagination: A Case Report

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**Introduction:** The aim of this study was to present non-Hodgkin's lymphoma, causing ileocecal invagination in a 29-year-old male patient.

**Case:** A 29-year-old male patient was admitted to our department with complaints of nausea, vomiting, loss of appetite, abdominal pain as intermittent cramping, which had started 5 days ago. He had a history of transposition due to tetralogy of fallot in his history. Physical examination revealed mild distention in the abdomen and tenderness in the right lower quadrant during palpation. There were no muscular defense and rebound findings. In ultrasonography, intercrossing bowel loops (invagination) in the 5.5 cm segment were identified at the ileocholec level. Abdominal computed tomography (CT) of the abdomen revealed an interwoven bowel appearance including appendix vermiform at the ileocecal site, significant increase in density due to inflammation in the peripheral mesentery, and multiple lymph nodes, wall thickening up to 15 mm in the removed colon and cecum. Laparotomy was performed with right paramedian incision. In the exploration, the ileocecal valve and the appendix were invaginated together into the cecum. A hard rubber thick mass with a diameter of approximately 7 cm was detected in the cecum. Appendix vermiform was edematous and approximately 1 cm in diameter. Numerous lymph nodes were detected in the mesentery. A large ileocecal resection was performed with the lymphovascular pedicle. The specimen was sent to the pathology laboratory for frozen section. Frozen section results were reported as compatible with lymphoma. The operation was terminated after the ileocholec anastomosis adjacent to the stapler. The patient was discharged on the 5th postoperative day without any problems. As a result of pathological examination; It was reported as diffuse large B-cell non-Hodgkin's lymphoma in the ileocecal region, 7x6 cm in size, with polypoid structure, originating from the terminal ileum, partially retaining the ileocecal valve and obstructing the lumen resulting in the invagination of the cecum. All 19 excised lymph nodes were reactive hyperplastic. The tumor was invasive to the subserosa. In the postoperative period, the case was consulted by medical oncology. The patient received 6 cycles of R-CHOP (rituximab, cyclophosphamide, doxorubicin, hydroxirubicin, vincristine and prednisone) chemotherapy protocol. The positron emission tomography (PET-CT) controls showed no evidence of FDG affinity malignancy. The patient's postoperative 17th month has been uneventful.

**Conclusion:** Invagination is seen much less frequently in adults than in children. While only 5% of invaginations occur in adults, they account for only 1-5% of all bowel obstructions. Clinical diagnosis is usually difficult because the symptoms are intermittent and non-specific. Ultrasonography and computed tomography may help in the diagnosis. Primary gastrointestinal lymphoma is a rare malignancy and may cause invagination in adults. In our case, non-Hodgkin's lymphoma that developed in the sole focus, causing invagination in the ileocecal region. Primary gastrointestinal lymphomas should be kept in mind in the differential diagnosis of invaginations in adults.

**Keywords:** Adult, ileocecal invagination, non-hodgkin lymphoma, resection, malignant, tumor

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## PP-0446 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# A Rare Upper Gastrointestinal System Hemorrhage Cause: Gastric Antral Vascular Ectasia

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**Introduction:** Gastric antral vascular ectasia (GAVE) is a rare cause of chronic upper gastrointestinal (GIS) hemorrhage and iron deficiency anemia with characteristic endoscopic and histological findings. Although it is responsible for 4% of non-variceal upper gastrointestinal system hemorrhage, the incidence is still unclear because it can be clinically silent. GAVE was first described by Ryder as "erosive gastritis with evident venocapillary ectasia" in the pathological examination of the gastrectomy specimens of the patients who underwent antrectomy in 1953. It is characterized by an erythematous appearance showing a linear and/or diffuse extension showing radial extension from the pylorus to the antrum. This typical endoscopic view was described by Jabbari as watermelon stomach. GAVE is frequently seen in elderly female patients, and 30% of patients have concomitant liver disease and 60% have autoimmune disease. Patients are usually asymptomatic. It is usually detected in the upper GIS endoscopy of iron deficiency anemia due to occult bleeding. No biopsy is needed due to its typical endoscopic appearance. Rarely, the result of massive gastrointestinal bleeding may present with melena.

In this case, we aimed to present a case with massive GIS bleeding, who could not be treated with endoscopic treatment methods and who underwent laparoscopic antrectomy.

**Case:** A 56-year-old female patient (BMI: 48) with type 2 diabetes mellitus and type 1 Gaucher disease was admitted to emergency unit with complaints of shortness of breath, weakness and melena. When her hemoglobin (Hgb) value was found as 5.6 gr/dL, she was hospitalized due to GIS bleeding. Three units of erythrocyte suspensions were given to the patient, and later in



the upper gastrointestinal endoscopy, it was revealed that revealed findings were consistent with GAVE with active bleeding, and simultaneous argon plasma coagulation was performed. Endoscopy was performed again because of the decrease in Hgb on the second day after the procedure and bleeding from the same foci was observed again. Argon plasma coagulation was performed for the second time. The bleeding was controlled, but the patient was scheduled to undergo surgery one day after the second procedure, as the patient had recurrent bleeding and Hgb reduction (Hb: 6.7 gr/dl). After erythrocyte suspension transfusion, the patient was operated. It was observed that the liver was cirrhotic in nodular form during the operation. The patient underwent laparoscopic antrectomy and gastroenterostomy. No transfusion was needed in the postoperative follow-up and the patient was discharged on the 6th day without any problems. The pathology revealed erosive gastritis with increased mucosal vessels, and extensive intravascular thrombus.

**Conclusion:** GAVE, which is usually diagnosed with chronic iron deficiency anemia, is a rare cause of massive GIS bleeding. Because of the comorbidities accompanying the patient, surgery is performed with high morbidity and mortality in this patient group. However, surgery should be kept in mind in cases where endoscopic treatment methods cannot be used.

**Keywords:** GAVE, GIS bleeding, portal hypertensive gastropathy

## PP-0447 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Rarely Seen Foregut Anomalies

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**Introduction:** Foregut Cystic Developmental Anomalies (FCDA) are extremely rare gastrointestinal malformations, seen especially in gastric localization. FCDA is thought to occur due to the non-involution of primitive structures in intrauterine life. In this report, we present two cases who underwent surgical treatment for FCDA.

**Case 1:** A 26-year-old male patient presented with non-specific epigastric pain. Upper gastrointestinal endoscopy examination and biochemical parameters were evaluated as normal. In abdominal computed tomography (CT) examination; In the gastric fundus superior localization, a cystic lesion, 77x57 mm in size, showing peripheral thin septations and thought to be associated with gastric wall was detected. Robotic cyst excision was performed. The postoperative period was uneventful and the patient was discharged on the 4th day. Histopathological examination was evaluated as Gastric Foregut Duplication Cyst.

**Case 2:** A 34-year-old male patient presented with non-specific epigastric pain. Upper gastrointestinal endoscopy examination revealed a possible submucosal lesion in the large curvature localization of the stomach, which pushed the normal-looking mucosa towards the lumen. Endosonographic examination revealed a lesion of submucosa origin with anechoic cystic content of 20x20 mm. Abdominal CT showed a second lesion in the small curvature of gastric proximal region, a 4x3 cm in size and with similar internal features with endosonographically defined lesion. Robotic cyst excision and gastric wedge resection were performed. The postoperative period was uneventful and the patient was discharged on the 4th day. Histopathological examination revealed that 2 lesions were Gastritis Cystica Profunda.

**Discussion:** Gastric foregut duplication cyst is a rare anomaly and is usually symptomatic in the first years of life. Rarely, it can remain asymptomatic or cause non-specific complaints until adulthood. Often it is localized in the large curvature of the stomach. Endosonography, computed tomography and magnetic resonance imaging are used in the diagnosis. Although malignant degeneration is very rare, adenocarcinoma, squamous cell carcinoma or neuroendocrine carcinoma may develop in the cyst wall epithelium. Therefore, surgical resection is recommended. Gastritis cystica profunda is also a very rare anomaly and although the etiology is not known exactly, it has been accepted that cystic glands enter into the submucosal area and cause polypoid hyperplasia and cystic dilatation. Clinical complaints are generally non-specific. It is usually incidentally diagnosed with upper gastrointestinal endoscopy, computed tomography or magnetic resonance imaging. Although very rare, it has been reported to be predisposing to gastric adenocarcinoma, therefore surgical resection is used in the treatment. There is a possibility of recurrence and long-term follow-up is recommended.

**Conclusion:** Foregut Cystic Developmental Anomalies are rare upper gastrointestinal malformations. In adults, they are usually asymptomatic and their diagnosis is incidentally made and surgical excision is recommended. For the differential diagnosis of cystic lesions of the upper gastrointestinal system, it should be remembered that both lesions were non-specific at time of admission and were detected in with radiological examinations.

**Keywords:** Foregut cystic development anomalies, gastric foregut duplication cyst, gastritis cystica profunda

## PP-0448 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Mesenteric Fibromatosis Invasive to the Removed Colon

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**Introduction:** Desmoid fibromatosis (DF) constitutes 0.03% of all tumoral lesions and the incidence rate is 2-4 per million. It is more common in female patients between the ages of 15-40. Although the most common site is the small intestine mesentery, the ileocolic mesentery, gastrocolic ligament, omentum, retroperitoneum and abdominal wall may also be involved. Although DF has a histologically benign character, it is locally invasive tumors and is associated with a high local recurrence rate, but has no metastatic potential. Most of them are asymptomatic but may also present with abdominal mass, abdominal pain and vomiting. Mesenteric desmoid may invade adjacent organs and intestinal obstruction, ischemia, hydronephrosis might occur. The sporadic form is very rare and it is necessary to exclude etiological factors such as previous trauma or surgery, long-term or high-dose estrogen use, Familial Polyposis Syndrome, Gardner Syndrome or Crohn's disease. In this article, we aimed to present a male patient with sporadic mesenteric fibromatosis presenting with abdominal mass.

**Case:** A 56-year-old male patient presented with a mass in the midline of the abdomen that had been lasting for 1 month. The patient had no history of previous drug use and no history of previous surgery or trauma. Physical examination revealed a partially mobile mass of approximately 10 cm in size in the epigastric region. In contrasted abdominal tomography, 11 x 9 cm in size adjacent to the small intestine meso in the midline of the abdomen was observed. The well-circumscribed mass which was primarily thought to be a gastrointestinal stromal tumor (GIST) was isodense with muscle tissue. No pathological findings were found in the lower-upper gastrointestinal endoscopy. The patient was scheduled for a surgery. In the exploration, a well-circumscribed mass of approximately 12 cm diameter invading the removed colon wall, localized in the superior mesenteric artery (SMA) and superior mesenteric vein (SMV) anterior. The mass after being dissected from the neighboring vascular structures, was excised including the colon segment which was thought to be invaded. Histopathological evaluation revealed spindle-like cells in the keloid-like collagen rich stroma. On immunohistochemical examination, CD-34, S-100, CD-117 staining was not observed in tumor cells, while some cells were stained with SMA. The findings were reported as compatible with mesenteric fibromatosis.

**Conclusion:** Sporadic DF is a rare entity. Patients should be investigated in detail prior to the operation and in terms of the presence of other accompanying pathologies. It should be kept in mind that during surgery additional organ resections may be needed since they are local invasive tumors and frequent recurrences may occur in the postoperative period.

**Keywords:** Desmoid tumor, mesenteric fibromatosis, abdominal mass

## PP-0449 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Robotic Heller Myotomy: Advantages - Disadvantages

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**Objective:** Achalasia; It is defined as the neurodegenerative motility disorder of the esophagus with peristalsis disorder and lower esophageal sphincter function loss. Robotic surgery; Because of its promising advantages compared to conventional minimally invasive methods, even today, it continues to be the preferred method in achalasia surgery. In this presentation, we present our initial experience of the robotic heller myotomy and discuss the progress of robotic surgery in the treatment of achalasia.

**Material and Methods:** The records of patients who underwent robotic surgery with the diagnosis of achalasia were evaluated retrospectively. The information of the patients was evaluated in terms of demographic data, duration of complaints, treatment options previously applied, robotic surgery technique and early post-operative period results.

**Results:** Between June 2016 and November 2017, of the 6 achalasia patients who underwent robotic heller myotomy 4 were male (66.7%) and 2 were (33.3%) were female. Their average age was 32 (20-51) and the average duration of complaint was determined as 4.6 (2-9) years. Only 1 patient (16.7%) had a history of two previous failed endoscopic balloon dilatation procedures, while no other treatment was performed in other patients. Robotic Heller cardiomyotomy was performed to all patients. Five patients (83.3%) underwent partial anterior fundoplication (Dor) as antireflux procedure and 1 patient (16.7%) could not receive antireflux procedure. One patient (16.7%) underwent cruroraphy for concomitant hiatal hernia while in 5 patients (83.3%) procedures were completed without posterior dissection of the esophagus. The average operation time was 165 minutes (range: 150-180 minutes) (mean console time: 103 minutes; limits: 95-110 minutes). During the early postoperative follow-up, no surgi-

cal problems were encountered, but 1 (16.7%) patient developed reflux complaints that were controlled by medical therapy. Average hospital stay was 3.6 (2-9) days. No recurrent disease was detected in the early clinical follow-up of 9 (6-14) months.

**Conclusion:** The success of surgical treatment in achalasia has been unquestionable for many years. There is a certain degree of mucosal perforation during the Heller myotomy procedure, whether open or classical minimally invasive methods are used. In addition to the technical advantages it brings, robotic surgery promises to have a much lower mucosal perforation rate, especially for achalasia surgery.

**Keywords:** Achalasia, heller myotomy, robotics

## PP-0450 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] SMA (Wilkie's) Syndrome; Early Results in 15-Case Series

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**Objective:** Superior mesenteric artery (SMA) syndrome is a rare clinical entity that occurs as a result of the compression of the third part of the duodenum between the aorta and the proximal portion of the SMA. The incidence is 0.013-0.3%. SMA syndrome should be considered in patients with unexplained rapid weight loss, atypical and recurrent obstructive findings. Acute cases are seen less frequently and conservative treatments are applied primarily, whereas in chronic cases, surgical treatments play the leading role.

**Material and Methods:** Patients who were diagnosed and operated with SMA syndrome between January 2014 and July 2017 in Afyon Kocatepe University General Surgery Department were retrospectively analyzed.

**Results:** Fifteen patients were included in the study. 8 of the patients were male and 7 were female. The average body mass index was 20.3. All of the patients had abdominal pain, weight loss and nausea and vomiting. Gastroduodenoscopy of all patients was normal in the preoperative evaluation. The evaluation was made with abdominal CT with dynamic contrast. Aortamezenteric angle was 8-19 degrees in patients. All patients underwent laparoscopic duodenojejunostomy. No cases had open surgery. The average operation time was 45 +/-13 min. The average hospital stay was 5.3 days. No postoperative anastomotic leakage occurred in any patient. One of the patients who started to have the same complaints on the postoperative 7th month underwent subtotal gastrectomy gastroenterostomy upon the detection of stenosis in duodenoenterostomy anastomosis and ptotic stomach.

**Conclusion:** SMA syndrome should be considered in patients with abdominal pain, weight loss, nausea and vomiting, and no pathology in endoscopic and other examinations. In treatment, conservative methods should be tried first. We believe that laparoscopic duodenojejunostomy can be performed safely as surgical treatment.

**Keywords:** Duodenojejunostomy, laparoscopy, superior mesenteric artery

## PP-0451 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Our Experience in Laparoscopic Gastric Tumor Surgery

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**Objective:** Minimally invasive surgery is superior to open surgery in terms of postoperative patient comfort and wound site problems and is preferred in all abdominal gastrointestinal system operations in recent years. Laparoscopic gastric tumor surgery is discussed in terms of its feasibility and safety, and its oncological results. Our aim in this study is to share the early results of gastric tumor surgery performed by laparoscopic method in our hospital.

**Material and Methods:** Laparoscopic gastric tumor surgery performed between September 2016 and January 2018 in Samsun Training and Research Hospital, Surgical Oncology Department were retrospectively analyzed in terms of postoperative results. Patients were evaluated in terms of patient characteristics, tumor characteristics, surgical approach, feasibility-reliability, postoperative follow-up and oncological results.

**Results:** During this period, a total of 14 patients underwent laparoscopic surgery due to gastric tumor. Eight patients were male and six patients were female; the average age was 59.6 (39-80). Diagnosis of patients; 11 patients had gastric adenocarcinoma, 1 patient had GIST, 1 patient had neuroendocrine tumor and 1 patient had inflammatory fibroid polyp. Location of lesions; 4 in the upper 1/3 stomach, 4 in the middle 1/3 stomach, 6 in the lower 1/3 in the stomach. Five patients were stage 1, 1 patient was stage 2 and 7 patients were stage 3. 8 patients underwent total gastrectomy, 5 patients underwent distal gastrectomy, and 1 patient

underwent wedge resection. D2 dissection was performed in 12 of the patients, the patient with stomach NET and had polyp excision did not undergo dissection. In total gastrectomy, esophagegenuostomy was performed in 6 patients with circular stapler and lateral stapler in 2 patients. Five patients with distal gastrectomy were performed side by side with gastrojejunostomy linear stapler. The closest surgical margin to the tumor was 2.7cm (1.4cm-5.5cm); The average number of lymph nodes removed was 28 (15-47). One patient had a chest tube upon perioperative pneumothorax development. The average postoperative hospital stay was 9.7 days (7-22). Postoperative complication in 1 patient was ARDS and subcutaneous infection while 1 patient had anastomosis leakage. There was no mortality after 1 month. The average follow-up period was 6.7 months (1-15). The patient who developed anastomotic leakage underwent dilatation 3 times on the development of stenosis. The patient who developed ARDS died due to pneumonia in the postoperative 3rd month and a patient died in the 13th month due to recurrence. The other 12 patients are followed-up without disease.

**Conclusion:** Although the number of cases is low and our follow-up period is short, it shows a long way ahead. We believe that laparoscopic surgery can be performed in accordance with oncological principles in patients with gastric tumors.

**Keywords:** Surgery, laparoscopy, gastric cancer

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## PP-0452 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Total Gastrectomy due to Gastric Cancer

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**Objective:** To evaluate the data and early results of 236 patients who underwent total gastrectomy for gastric adenocarcinoma.

**Material and Methods:** In patients who underwent curative total gastrectomy between January 2001 and December 2016 due to gastric adenocarcinoma, early results of lymph node dissection techniques, patient files, preoperative blood transfusion, sex, age, surgery times, pancreatic fistula development, duodenal stump leakage, splenectomy due to splenic injury, duration of postoperative hospital stay, its effects on mortality were evaluated. In this study group, interventions with no remaining macroscopic tumor were evaluated as curative resections. In the histopathological evaluation the differentiation degree and type of the tumor were analyzed. Histopathological analysis, was based on WHO classification.

**Results:** Of 236 patients who were operated for gastric cancer 18 years of age or older were included. 148 (62.7%) of the patients were male and 88 (37.3%) were female. The average age was 65.5±11.4. According to D1, D2, D3 dissection type, operation time, number of lymph nodes, number of metastatic lymph nodes and length of stay, differences determined according to the parameters were statistically significant.

**Conclusion:** D1, D2, D3 lymph node dissection in gastric cancer surgery might be performed safely by surgeons with sufficient technical knowledge at centers with sufficient hospital volume with low mortality and morbidity rates. Problems such as stage shift, extended lymph node dissection and skip metastasis can be reduced to the lowest level and staging of the disease and treatment planning be made more accurately. Gastrectomy and expanded lymph node dissection is the gold standard for gastric cancer treatment.

**Keywords:** Stomach cancer, lymph node dissection, adenocarcinoma

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## PP-0453 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Mass in the Right Lower Quadrant; Retroperitoneal Localized Gastrointestinal Stromal Tumor

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**Introduction:** Gastrointestinal stromal tumors (GIST) develop from Cajal cells, which are pacemaker cells responsible for the adjustment of peristalsis in the digestive tract. The prevalence is 7-15 per million. GISTs can be seen in all gastrointestinal tract, in order of frequency; stomach (60%), jejunum and ileum (30%), duodenum (5%) and colorectal (5%). Small intestine GISTs may present with a small nodule or a giant tumoral mass. Although the clinical symptoms and signs are generally nonspecific, they may cause gastrointestinal bleeding, intestinal obstruction, pelvic mass, acute pain like appendicitis, tumor rupture and acute abdomen.

**Case:** A 58-year-old woman was admitted to the general surgery outpatient unit with a complaint of abdominal pain. Physical examination was unremarkable. In the abdominal USG, a well-defined hypervascular solid lesion 19x19x21 mm in size, in the

right lower quadrant of the abdomen was observed; its origin could not be detected. Abdominal computed tomography showed a 21x23 mm lesion in the right lower quadrant adjacent to the psoas muscle. Laparoscopic exploration was performed. Retroperitoneal area was entered from the ileocecal region. Retroperitoneal area was opened and surrounding of the mass was cleaned and the lesion that was found to be ileum wall originated was resected via endostapler and the operation was terminated. The patient who was comfortable during the abdominal examination on the postop 1st day was started a diet and the patient was discharged. Pathology was reported as 3.5 cm in size, gastrointestinal stromal tumor, with spindle cell, in low risk group.

**Conclusion:** In patients presenting with a mass in the right lower quadrant, the ileal gist should be kept in mind. Laparoscopic mass excision can be performed safely.

**Keywords:** Gist, laparoscopy, ileum

## PP-0454 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Intestinal Lymphoma and Perforation

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**Introduction:** Lymphomas are not very common in the gastrointestinal tract, but small bowel involvement is rare. After adenocarcinoma and carcinoid they are the 3rd most commonly seen tumors in the small intestine. Lymphomas with small intestine involvement may cause symptoms such as bleeding, abdominal pain, palpated mass, obstruction depending on the segment localization. We aimed to present a case of perforation secondary to the involvement of the primary small bowel lymphoma.

**Case:** A 59-year-old male patient presented to the emergency department with abdominal pain. He had been diagnosed with non-Hodgkin Lymphoma 2 months ago and had intestinal originated malignant tumor but he wasn't receiving any oncologic treatment for lymphoma. Physical examination revealed widespread tenderness and rebound. Leukocytosis and intraabdominal free air were detected in the examinations. Abdominal tomography showed minimal dimensional progression in the mass lesion and a free air appearance in the abdomen. The patient was immediately taken into operation. In the operation, it was observed that it invaded the abdominal anterior wall, caused intestinal malrotation, was approximately 200 cm from the terminal ileum and perforated in this area. The small intestine was partially and mass was totally excised. Histopathological examination of the mass revealed diffuse large cell lymphoma. The patient was discharged from the hospital on the postoperative 18th day, and referred to the hematology polyclinic for oncologic treatment.

**Conclusion:** Small bowel lymphomas are rarely seen and account for 1-4% of all lymphomas. Although gastrointestinal lymphomas are mostly seen in the stomach, small intestines and colon follow the stomach. Primary gastrointestinal lymphoma was first described by Billroth and is usually the histopathologic type non-Hodgkin lymphoma. Abdominal pain, weight loss, nausea and vomiting are common symptoms. Although perforation is seen in 20-25% of patients, tumor cells are seen more frequently in patients receiving chemotherapy due to necrosis. If perforation is present in patients diagnosed with lymphoma, the perforation secondary to lymphoma should be considered.

**Keywords:** Intestinal lymphoma, intra-abdominal mass, perforation, gastrointestinal bleeding

## PP-0455 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### A Case of Esophageal Ulcer due to Tetracycline Use

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**Introduction:** Esophagitis is the most common cause of esophageal diseases characterized by retrosternal pain, odynophagia and dysphagia. Drug-induced esophagitis is the occurrence of ulcers or damage to the esophageal mucosa due to the use of various drugs. More than 650 drug-induced esophagitis cases and over 30 responsible drugs have been reported worldwide. Approximately 50% of the responsible drugs are tetracycline, doxycycline and clindamycin. The prevalence of esophagitis and esophageal ulceration has increased due to the widespread use of tetracyclines in genital infections. Here we present a case of drug-induced esophageal ulcers who did not know what to look for when taking their medication, so they used tetracycline with a small amount of water every day before bedtime.

**Case:** A 29-year-old female patient presented with retrosternal pain and burning. The patient, who did not have a chronic disease, presented to the gynecologist and obstetrician with vaginal discharge one week ago. She was started on tetracycline

4x500 mg tb with pelvic inflammatory disease diagnosis and was using it for seven days. She also stated that she had been taking especially the night dose right before going to bed with a small amount of water. She was admitted to the general surgery outpatient unit for painful ingestion, difficulty swallowing, retrosternal pain after ingestion and burning. Laboratory findings and examination revealed no pathology. The patient was hospitalized with the diagnosis of esophagitis. Tetracycline treatment and oral intake were discontinued and parenteral nutrition was started. Upper gastrointestinal system endoscopy revealed ulcerative lesions surrounding the lumen in the middle part of the esophagus and biopsy was performed. Sucralfate and proton pump inhibitor were given as treatment. Infectious diseases department were consulted for pelvic inflammatory disease and maintenance antibiotics were not needed. After 10 days of follow-up, the patient was discharged with normal endoscopy, no complaints, no complications and the pathology consistent with ulcer.

**Discussion:** It is thought that the rate of drug-induced esophageal injury is higher than thought, but due to the lack of hospital admissions or late admissions it cannot be determined exactly. Gelatin coated medication, low water intake, drinking before bedtime, motility disorder or presence of stricture are the risk factors for drug-induced esophageal injury. There are complaints such as retrosternal burning in esophageal damage which can be seen especially after antibiotics use such as NSAIDs or doxycycline, tetracycline. The diagnosis is made by barium graph or esophagogastroduodenoscopy. In treatment, it is important to discontinue the causative drug and sucralfate, antacid, proton pump inhibitor can be used.

**Conclusion:** When drugs capable of esophageal damage are prescribed, the physician should adequately inform the patient about drug intake. It should be explained to the patients that the drug should be taken with abundant water, not taken before going to bed, should not lie on his/her back for at least 30 minutes after taking the medicine, he/she should discontinue his/her medication in any complaint such as difficulty in swallowing or retrosternal pain occurs. In addition, the use of medication should be questioned in patients presenting with symptoms related to esophagus, such as odynophagia.

**Keywords:** Esophagitis, tetracycline, ulcer

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## PP-0456 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Coexistence of Ampulla Vater Tumor and Castleman's Disease; A Rare Case Report

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**Introduction:** Castleman's disease, also known as angiofollicular lymph node hyperplasia, is a rare disease characterized by benign proliferation of lymphoid tissue and was first described by Castleman and Towne in 1954. Although the disease is most commonly localized in mediastinum, it can be seen along the lymphatic chain located in the abdominal pelvis, mesentery, and retroperitoneum. Here, we present a review of the literature on Castleman's disease in a patient with Whipple surgery due to ampulla Vater tumor.

**Case:** A 58-year-old male patient who was admitted to our hospital with dyspeptic complaints, was found to have ampullary mass that caused dilation in the pancreatic canal and IHSY after ERS and ERCP, and large lymph nodes in the hilar region. CT imaging revealed a 3x3.5 cm diameter tumor located in the periampullary region and multiple lymphadenomegaly located in the periportal, celiac and portocaval regions and were interpreted as lymph node metastasis. The patient was operated with a prediagnosis of periampullary tumor and pancreaticoduodenectomy (Whipple procedure) was performed. The patient was discharged on the 11th postoperative day without any problem. Histopathological examination of the surgical material revealed adenocarcinoma in ampulla Vater. A total of 19 lymph nodes with a size of 2.5-7.5 cm were removed, there was Castleman's disease in the lymph nodes, and no metastasis was reported. Wang et al. retrospectively studied eight patients with Castleman's disease localized to the pancreas region in 2007 and reported the first case of Castleman's disease at the head of the pancreas. In the literature, 9-10 patients who were prediagnosed with pancreas tumor were performed Whipple procedure but only patients diagnosed with Castleman's disease were reported. We haven't found any publication indicating the coexistence of Castleman's disease and ampulla Vater tumor.

**Conclusion:** Castleman's disease or angiofollicular lymph node hyperplasia localized in the pancreas region is a rare clinical condition. In patients with pancreatic tumors, in the presence of enlarged giant lymph nodes, inoperability can be predicted and Castleman's disease should be remembered. However, surgical excision in Castleman's disease with or without a pancreatic tumor is a method that should be applied for both diagnosis and treatment of the disease.

**Keywords:** Ampulla vater tumor, whipple surgery, lymphadenomegaly, castelman's disease, treatment

## PP-0457 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

**Giant Intraabdominal Leiomyosarcoma: A Rare Tumor with Unpredictable Origin and Prognosis****Selçuk Köksal<sup>1</sup>, Neriman Şengül<sup>2</sup>, Özkan Kılınc<sup>3</sup>, Nur Tunç<sup>4</sup>, Direnç Yiğit<sup>2</sup>**<sup>1</sup>*Department of General Surgery, Abant İzzet Baysal University School of Medicine, Bolu, Turkey*<sup>2</sup>*Division of Gastroenterology Surgery, Department of General Surgery, Abant İzzet Baysal University School of Medicine, Bolu, Turkey*<sup>3</sup>*Department of Radiology, Abant İzzet Baysal University School of Medicine, Bolu, Turkey*<sup>4</sup>*Department of Pathology, Abant İzzet Baysal University School of Medicine, Bolu, Turkey*

**Introduction:** Leiomyosarcoma (LMS), a smooth muscle connective tissue tumor, is a rare type of cancer that accounts for 5-10% of soft tissue sarcomas. While most of the LMS is from the retroperitoneal or uterus origin, LMS from the abdomen has been reported much more rarely. The organ that LMS is originating from affects the treatment regimen. We report a case of intraabdominal LMS presenting with a giant intra-abdominal mass.

**Case:** A 48-year-old woman was admitted to our department with abdominal pain, loss of appetite, shortness of breath, and growing and palpable mass in the abdomen that had been lasting for the last 5 months. In the abdominal examination, there was a giant mass covering all quadrants. No pathology was detected in the biochemical parameters other than CA125: 740 U/mL (0-35 U/mL). Colonoscopy showed no pathology. On abdominal ultrasonography, a solid lesion beginning from the inferior of the symphysis pubis and extending to the epigastric region, whose borders could not be determined sonographically covering the whole abdomen, including areas of cystic degeneration and that caused the liver, spleen and both kidneys pushed was observed. Abdominal MRI revealed a giant, heterogeneous contrast-enhancing mass with 280x280x250 mm size, starting from the subhepatic plane, filling the right and left upper quadrant of the abdomen and ending in the inferior bladder and superior and left lateral neighborhood with heterogeneous signal feature. It was interpreted as giant intraabdominal mass (leiomyomatous and/or sarcomatous lesion) radiologically. The patient was operated. A mass of 10 kg and 30x30 cm in size was observed in the operation. Total mass excision, right hemicolectomy and segmental small bowel resection were performed. It was observed that the mass was not invading intraabdominal vascular structures, had no relationship with retroperitoneum, and was severely adherent to the right colon and terminal ileum. The pathology was reported as leiomyosarcoma grade 2/3 (FNCLCC) and its primary origin could not be detected. In the immunohistochemical study, the tumor was stained positively with desmin, MSA and SMA. CD117, CD34, S-100 and CD68 were negative. No tumor tissue was found in the surgical margins. No pathology was observed in the postoperative 2nd month follow-up in the patient without adjuvant chemotherapy.

**Conclusion:** The localization and clinical features of leiomyosarcomas, which may originate from all areas of smooth muscle tissue, may be helpful in determining subsequent treatment approaches.

**Keywords:** Leiomyosarcoma, treatment, soft tissue sarcomas

## PP-0458 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

**Comparison of Subtotal Gastrectomy and Total Gastrectomy in Distal Gastric Cancer: (Review)****Enver İlhan, Orhan Üreyen***Department of General Surgery, İzmir Katip Çelebi University, Atatürk Training and Research Hospital, İzmir, Turkey*

Gastric cancer is one of the leading cancers in cancer-related deaths worldwide and curative therapy is surgery. The choice of resection in these tumors depends on the location of the tumor, the size and stage of the tumor. Conducting total gastrectomy (TG) or subtotal gastrectomy (SG) is still controversial for distally located gastric cancers. In distal Gastric cancers: TG is suggested owing to the hypothesis that it reduces the likelihood of recurrence, eliminates multisentric cancer foci in the remaining gastric tissue after subtotal gastrectomy and eliminates the possibility of remnant gastric cancer that may develop as metachronous. However, there are studies reporting that there is no difference in terms of survival between TG and SG in addition to the studies reporting that TG or SG is superior. Discussion on the postoperative mortality and morbidity rates for both methods is still ongoing. In this review, 10 retrospective studies, six randomized controlled trials and two meta-analyses were evaluated. A review of all of these studies indicates that, especially in distal 1/3 gastric cancers, the debate on SG or TG administration continues, although more results have been reported in favor of SG. The proponents of both opinions have valid reasons. Randomized controlled studies are needed to cover more long-term outcomes, with broader participation, more definitive inclusion and inclusion criteria, standardization of surgical procedures, evaluation according to clinicopathological findings, especially in the case of remnant gastric cancer which may occur many years later as a result of SG.

**Keywords:** Gastrectomy, gastric cancer, survival

## PP-0459 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Giant Mesenteric Lipoma, A Rare Cause of Abdominal Pain: Case Report

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**Introduction:** Mesenteric lipomas are rare and frequently asymptomatic. They are usually complicated when they are symptomatic. In this study, a case of giant mesenteric lipoma causing nausea, vomiting and abdominal pain is present since it blocked the passage through the compression on the intestine.

**Case:** A 26-year-old male patient presented with abdominal pain, nausea and vomiting after eating for 7 days. On examination, the abdomen was relaxed but a soft contoured mass extending over the umbilicus was palpated. Upon the detection of a 24x18 cm homogenous, with fat density well-circumscribed mass on the abdominal CT, surgery was scheduled. In the exploration, a 25 cm smooth lipomatous mass was detected in the mesenteric area which led to compression on approximately 40 cm of ileal loop, 20 cm proximal to ileocecal valve. The ileus was resected with the distorted ileal loop and the ileoileal anastomosis was performed. The patient was discharged without any problems on the postoperative day 7. The pathology of the mass was as mesenteric lipoma.

**Conclusion:** In the differential diagnosis of abdominal pain, mesenteric lipomas should be remembered and they should be remembered that their symptoms will change according to their location and size. When they are symptomatic, excision should be planned to prevent possible complications. The decision on whether or not the intestinal segment associated with mesenteric lipomas is included in the excision may vary from case to case.

**Keywords:** Intestine, abdominal pain, lipoma, mesentery, obstruction

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## PP-0460 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Analysis of Cases Diagnosed with Small Intestine Adenocarcinoma

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**Objective:** In the literature, the oncological treatment of adenocarcinomas originating from the small intestine is limited. The aim of this study is to present the diagnosis, treatment and follow-up results of the patients whose pathological diagnosis was confirmed in our department.

**Material and Methods:** The patients who were admitted to our hospital with abdominal pain between 2010 and 2017 and were evaluated as small intestine adenocarcinomas as a result of either urgent or elective laparotomy were evaluated retrospectively.

**Results:** Of the 7 patients who were treated with the diagnosis of small bowel adenocarcinoma, 3 (42.8%) were female and 4 (57.2%) were male. The average age was 52 years (39-80). 5 (71.4%) of the cases were operated emergently (ileus) and 2 (28.6%) were electively. In one of 7 patients (14.2%), preoperative diagnosis of peutz jegher was present. In 2 patients (28.4%) the pathological examination revealed mucinous component. The median follow-up period was 2 years (1 month-6 years) and 1 had a mortal course and 1 had a local recurrence. In all patients, segmental resection was performed with lymph node dissection and 5-fluorouracil was given as adjuvant therapy.

**Conclusion:** Most cases of small bowel adenocarcinoma present with obstructive symptoms. It should be kept in mind in the differential diagnosis of ileus in emergency patients, especially in elderly patients. In the treatment of adenocarcinomas with small bowel origin, surgical resection and adjuvant therapy with extended lymphatic dissection are associated with positive oncologic outcomes.

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## PP-0461 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] A Case of Advanced Esophageal CA Masked by Goiter

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**Introduction:** Although esophageal malignancies are rare cancers of the gastrointestinal tract, mortality is high. Life expectancy of patients diagnosed at an early stage is significantly increased. In this report, we present a patient who had swallowing difficulty for about 1 year and attributed this to the goitre which had been present for many years and diagnosed as advanced stage esophageal malignancy.

**Case:** A 81-year-old female patient was admitted to our outpatient department with the complaint of dysphagia. The patient had been under follow-up for many years due to toxic multinodular goitre and was taking thyromazole. In the physical examination, there was a palpable nodular swelling of approximately 5x6 cm on the anterior part of the neck. In the laboratory, thyroid hormones were observed as free T3 2.82 uIU/mL, free T4 1.23 uIU/mL and TSH 0.026 uIU/mL. There were no significant changes in her laboratory other than thyroid hormones. The patient was followed up for further examination and imaging. Neck computed tomography (CT) was performed. Her CT was compatible with locally invasive oesophageal cancer with heterogeneous wall thickening, heterogeneously stained with contrast agent, which is probably indistinguishable conglomerated lymphadenopathy (LAP) from nerves, infiltrating mediastinal fat plans from the carinal level to superior half of the proximal esophagus. In continuity with lumen, among the brachycephalic vascular structures on the left with prolongation and invasion/infiltration to the thyroid gland showing nodular guatrogen growth were observed. It was interpreted as "Diffuse mediastinal laps, pleural and parenchymal metastases were observed". Intermittent mediastinal lap, pleural and parenchymal metastases were observed. Gastroscopy revealed a fragile, infiltrating and malignant appearance which did not allow the passage of the endoscopy at approximately 14-15 cm from the incisors. Radiation oncology follow-up was planned after surgical feeding tube gastrostomy. However, the patient was discharged on her own request.

**Conclusion:** Esophageal cancer accounts for approximately 7% of gastrointestinal system malignancies. It is ranked 6th in terms of cancer-related deaths. It is a tumor with curative treatment chance in patients diagnosed at early stage. In 25% of locally advanced tumors, distant metastasis is detected in the first 2 years. The most common sites of metastasis are lung, liver and bone. Esophageal carcinoma can be seen with dysphagia, odynophagia, weight loss, epigastric pain and aspiration pneumonia. The most common observed symptoms are weight loss and dysphagia. Similar findings are found in goiter patients. As it happened in our case, in case of synchronous two diseases, malignancy may be missed in the early period. As a result, although the difficulty of swallowing is a clinical manifestation of goiter disease, esophageal diseases which may be the underlying disease in elderly patients should be among the differential diagnoses.

**Keywords:** Gastrointestinal malignancy, goiter, esophagus CA

## PP-0462 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Mortal Complication of Incidental Meckel's Diverticulum

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**Introduction:** Meckel's diverticulum is a true diverticulum that is located on the antimesenteric side of the ileum and contains all the layers of the intestinal wall. It results from the omphalomesenteric channel's not being completely obliterated in the 5th-7th month of pregnancy. Meckel's diverticulum is usually asymptomatic and is seen incidentally. It may can cause complications such as bleeding, stenosis, diverticulitis, invagination and perforation, and is symptomatic in these cases.

In this article, we aimed to present a patient who was operated for acute abdomen and whose meckel diverticulum was not resected and was perforated two months later.

**Case:** A 84-year-old male patient was admitted to our center with the complaint of abdominal pain, nausea and vomiting. The patient had tachycardia with 110, 130/70 blood pressure, 37.5 degrees of body temperature, and 95% saturation. In the laboratory parameters, WBC: 22.700/mL, Hb: 9.7 g/dL, CRE: 2.56 mg/dL, CRP: 152 mg/L. In physical examination; there was widespread tenderness and defense in the abdomen. The patient was diagnosed with acute abdomen findings. Laparoscopic surgery was performed. Upon the detection of widespread purulent fluid in the abdomen, open surgery was initiated. In the exploration, appearance compatible with a 4 cm meckel diverticulum 40 cm proximal of the cecum was incidentally detected. No perforation and other pathologies were found. Because the patient was thought to have primary peritonitis, resection was not performed in the meckel diverticulum due to the presence of intraabdominal infected fluid. Liquid therapy was scheduled for the patient with preoperative prerenal ABY clinic. Enterococcus faecium was produced in the abdominal fluid culture. The patient was discharged four days after the administration of piperacillin + tazobactam and flu-conazole since his laboratory and clinical findings were normal.

Two months later, the patient presented to our center with complaints of abdominal pain, nausea and vomiting. Tachycardia at 105, 130/70 BP, 38 degrees body temperature and 97% saturation were present. Laboratory parameters were WBC: 5900/mL, Hb: 11.6 g/dL, CRE: 2.18 mg/dL, CRP: 21 W mg/L. In his physical examination acute abdomen clinic was present. There was free air in his standing intraabdominal imaging and CT. The patient was operated due to acute abdomen and sepsis findings. In the

exploration, it was observed that the meckel divergent seen in the previous operation was adhered to the anterior abdominal wall at the right inguinal region and perforated with a diameter of about 0.5 cm. There was an infected small intestine content in the abdomen. It was decided to perform a loop ileostomy after Meckel's diverticulum excision. The loop that was performed Meckel's diverticulum excision on was turned into anastomosis as loop ileostomy in the anterior right quadrant. He was treated with Piperacillin + tazobactam and his liquid treatment was regulated but his sepsis findings did not show regression and he died on 4th postoperative day.

**Conclusion:** Although the resection of symptomatic meckel diverticulum is widely accepted in the literature, the necessity of resection of asymptomatic meckel diverticulum that is incidentally identified is controversial. Although Meckel's diverticulum is rare and mostly clinically silent; it may cause obstruction, hemorrhage, diverticulitis, invagination and perforation as it happened in our case. In conclusion, it should be kept in mind that Meckel's diverticulum may cause mortality due to complications. In patients without resection, the development of acute abdomen should be warning sign for complications.

**Keywords:** Meckel's diverticulum, incidental, mortal, acute abdomen, perforation

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## PP-0463 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Drain is an Obstacle for the Recovery of Prolonged Gastrointestinal Fistulas

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**Introduction:** Discussion on indications for use of drains in abdominal surgery continues today. It is stated that routine use of drain in laparoscopic cholecystectomy increases morbidity without a significant advantage. Drainage may delay the recovery of prolonged fistulas in the postoperative period. Keeping the drain in place, as discharge continues coming from the drain, may prevent the prolonged fistula from closing. The surgeon is afraid to take the drain out. The fistula becomes chronic.

**Case:** She presented with complaints of swallowing difficulties and weight loss. She had a Nissen Fundoplication surgery 11 months ago. During this time the patient lost 40 kg. She could only consume liquid. She was performed two balloon dilatation surgeries at the same institution. No results were obtained. Thoracic tomography revealed an advanced dilated appearance of the esophagus, air-fluid level in the lumen and appearance were consistent with food residue. In the esophagography, esophagus was markedly dilated. The first diagnosis was thought to be achalasia. The patient was operated. The esophagus was dilated in the abdomen. Hiatorafi and Nissen got disrupted. Cardiomyotomy was performed. At the distal part of cardiomyotomy, mini perforation (3-4 mm) was formed in the complete esophagus-stomach junction. It was repaired with 5/0 PDS and found that it did not pass the fluid. Toupet was performed. Stomach was dilated, pylorus was spastic. Vagus could not be found. It was thought that vaguses might have been cut in the previous surgery so Weinberg pyloroplasty was added. On the second postoperative day, the drain fluid was bilious. There was no Nazogastric. The discharge coming from the drain started to increase (250 mL/day). Nazogastric was removed. Oral intake started in that same week. The oral fluid was coming to the drain. Contrast-enhanced radiography showed contrast in the drain and stomach. TPN started. The patient was observed for three weeks. The drain was removed considering that the fistula tract was well developed. There was nothing coming from the drain. Contrast radiography revealed contrast in the stomach. Fistula path could not be displayed. The fistula got closed. Oral intake started. Nothing came out. No deposits were detected. The regime was increased. The patient had no problems on the 3rd day since the drain had been removed, the regime was increased to 3. The patient is in her 3rd postoperative month. She consumes every type of food. She gained 10kg.

**Conclusion:** The difficulty of swallowing in our patient had been probably attributed to hiatus hernia and Nissen fundoplication had been performed. The patient's complaints had increased. The patient's preoperative diagnosis was probably achalasia. In the reoperation, the procedures performed during the previous operation were disrupted and cardiomyotomy was performed. Nissen was changed into Toupet. Since Nissen could not be performed on the esophageal perforation that developed during cardiomyotomy and because the stomach was very adherent and the repair we performed was safe, front part of stomach section was not closed with perforation.

Our aim was to show that when certain fistulas were to become chronic, under certain conditions the drain was to be removed and the fistula would be closed. The drain itself ensured the continuation of the fistula. In order for the closure of the fistulas shortening the drain slightly would not be sufficient, the drain should be removed completely.

In patients with dysphagia, it should be considered that the problem might be achalasia. When performing cardiomyotomy in the achalasia, inflated myotomy should be avoided especially at the esophagus-stomach border. Conducting sutures on the opened mucosa is not enough. Omentoplasty or Dore surgery should be added. In prolonged GIS fistulas (lasting 15-20 days), drains may prevent the fistula from closing. In cases where the flow rate of the fistula does not exceed 300 cc/day, removing the drainage after the fistula path has matured will cause the fistula to close.

**Keywords:** Achalasia, drain, gastrointestinal fistula, complication, nissen fundoplication

## PP-0464 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Investigation of Prokinetic Efficacy of Uterotonic Drugs (Experimental Study)

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**Objective:** Although there are many etiological factors in the development of gastroparesis, in our practice, post-operative gastroparesis is the most frequently encountered complication after surgical procedures. The efficacy of prokinetic agents such as metoclopramide in postoperative gastroparesis is currently known. In our study, we aimed to present that some drugs (oxytocin, methyl ergonovine and cloprostenol) which have contractile activity on uterus smooth muscles may have similar effects on smooth muscles of stomach.

**Material and Methods:** In the study, 5 groups were formed with 7 rats in each group. Group 1: Sham, Group 2: Metoclopramide, Group 3: Oxytocin, Group 4: Methyl Ergonovin and Group 5: Kloprostenol. After performing gastrectomy with laparotomy, the subjects were sacrificed. The stripler taken from the stomach fundus and prepared separately were taken to the isolated organ bath containing the modified krebs solution. Dose response curves were obtained by applying cumulative doses of the drugs in the groups and these findings were compared between the groups.

**Results:** After the evaluations, the contraction response was not observed in the smooth muscle of the stomach in the saline group, metoclopramide group and methyl ergonovine group. The relaxation response from the oxytocin group was observed. In the cloprostenol group, there was a continuous increase in contractile response after dose-dependent cumulative application.

**Conclusion:** Metoclopramide enhances proximal gastrointestinal motility primarily through the inhibition of dopamine D2 receptors and serotonin 5-HT<sub>4</sub> receptor agonist and 5-HT<sub>3</sub> receptor antagonist properties. In our study, the most frequently used metoclopramide as a prokinetic agent in the postoperative gastroparesis cases was the positive control group. However, we did not observe any contraction after metoclopramide application in the study of rat stomach fundus tissue in isolated organ bath. We thought that increased gastric emptying was performed by metoclopramide with different mechanisms.

It has been reported that oxytocin has an inhibitory effect on muscle contractions in rat duodenum and rabbit colon. It has also been reported to increase gastric motility. In a study conducted by Wang et al., it was observed that it inhibited the proximal colon contractions dose-dependently in rats. They showed that this effect was mediated by NO released from enteric neurons.

Methyl ergonovine is a partial agonist/antagonist agent in serotonergic, dopaminergic and alpha adrenergic receptors. With 5HT<sub>2A</sub> receptors, it causes contractions in the uterus smooth muscles. There was no study on the smooth muscle of the stomach performed with methyl ergonovine. In our study, it was observed that methyl ergonovine had no effect on the smooth muscles of the stomach. This is the first experimental study in the literature.

It was observed that cloprostenol had a significant contractile effect on the stomach smooth muscle. In the future studies, cloprostenol can be used as a stomach contractile causing agent and can also be used in gastric emptying difficulties with subsequent studies. A prokinetic agent, metoclopramide, has not been shown to have a contractile effect on the stomach smooth muscle. The effect of metoclopramide on gastric emptying is probably due to different mechanisms. There was no contractile effect of methyl ergonovine while oxytocin was found to have a relaxing effect.

**Keywords:** Gastroparesis, uterotonic drugs, prokinetic activity

## PP-0465 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# A Rare Cause of Chronic Abdominal Pain; Median Arcuate Ligament Syndrome

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**Introduction:** Median arcuate ligament syndrome (MALS) occurs when the median arcuate ligament (MAL) compresses the root of the celiac artery. It is characterized by postprandial abdominal pain. Pain is more prominent, especially due to increased ischemia resulting from increased pressure in the expirium. In this paper, we present a case operated in our clinic who was diagnosed with MALS.

**Case:** 43 year old male patient was admitted to our unit with complaints of abdominal pain and weight loss that continued for a few hours after meals for the last year. Physical examination revealed no pathological findings except appendectomy scar in the right lower quadrant. There was no abnormality in his laboratory values. CT (Computed tomography) showed parenchymal

calcification with a diameter of 1 cm in liver segment 5. The liver axe was 19 cm, longer than normal. It was reported as 'significant stenosis was detected in the proximal celiac trunk due to arcuate ligament compression (approximately 70-80% level)' (Dumbar syndrome). The patient was scheduled for a surgery and celiac truncus dissection and ligament decompression were performed. The patient was discharged after postoperative clinical follow-up. CT angiography was planned upon the recurrence of the symptoms one year later. According to the CT angiography report 'lumen diameter decreased to approximately 1.5 mm at the exit of the celiac artery and approximately 70% stenosis due to external compression was present' (MALS). It was interpreted as 'the proximal segments of the main vessels, except for the celiac artery originating from the abdominal aorta, are natural'. The patient was reoperated and was discharged from the hospital.

**Conclusion:** MALS appears as a vascular problem resulting from MAL pressure on the celiac artery. MAL T12-L1 level is a structure between the diaphragm crus. Ischemia related pain occurs when this structure applies compression on the celiac artery. More pronounced symptoms are observed due to increased compression on the proximal of the celiac artery resulting from the tension of the ligament particularly when the diaphragm moves to superior in expiration. Although MALS is one of the etiology of chronic abdominal pains, it should be considered after excluding other etiological factors in patients with persistent postprandial pain. CT is recommended as a diagnostic method. Surgical ligament decompression is performed as treatment. It should be kept in mind that MALS may relapse as in this case, and patients should be monitored for long-term recurrence.

**Keywords:** Celiac artery, diaphragm, chronic abdominal pain, median arcuate ligament syndrome

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## PP-0466 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Meckel Diverticulum Associated with Jejunum and Ileum Diverticulum

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**Introduction:** Diverticulum is the prolapse of the whole or part of the intestinal wall out of the bowel. Meckel's diverticulum is the omphalomesenteric (vitelline) duct residue. In 4-5% of patients who were admitted to the emergency department with the diagnosis of acute abdomen and were operated, the findings of these two tables are present but very rare. In this presentation, we aimed to emphasize the rare association of Meckel and small bowel diverticulum.

**Case:** Jejunal torsion was observed in the immediate laparotomy performed on the 84 year old male patient with acute abdomen prediagnosis. When the torsion was corrected, it was seen that blood flow was restored and bowel movements returned. In this case, diffuse false diverticulum and meckel diverticulum were found in jejunum and ileum during exploration.

**Conclusion:** While the incidence of diverticulum cases in the autopsy series was between 0.3% and 1.3%, the radiological incidence was 2.3%. Jejunal and ileal diverticulums are false diverticulums since they have non-muscular walls, and are thin and delicate. False diverticulums are usually diverticulums which develop on the mesenteric face by means of the pulsion mechanism and contain only mucosa and serosa layers in the wall. Meckel's diverticulum, on the other hand, is a congenital lesion that contains 3 layers of intestinal wall and is a real diverticulum. Meckel's diverticulum is one of the small bowel anomalies which are detected at laparotomy or autopsy at 2%. They are mostly asymptomatic and can be complicated by 4%. Complications include bleeding, volvulus, perforation, inflammation, bowel obstruction and malignant transformation. In this case, we present that jejunal and ileal diverticulum together with Meckel's diverticulum, which has very low incidence.

**Keywords:** Small bowel diverticulum, meckel diverticulum, acute abdomen

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## PP-0467 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Foreign Body Causing Gastrointestinal Perforation: 2 Case Reports

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**Introduction:** Foreign body ingestion is more common in children. It is less frequently seen in adulthood; chronic alcoholics, people with epilepsy or psychiatric disorders and mental retardation. Approximately 95% of the swallowed objects are removed through passages without any symptoms. In this case report, foreign bodies that produce perforation in the stomach and small bowels are presented.

**Case 1:** A 45-year-old male patient was admitted to the emergency department with abdominal pain lasting for 8 days. The patient had periumbilical tenderness and the other systemic examinations were normal. Blood count and biochemical parameters were normal in laboratory evaluation. A radiopaque view of the foreign body localized at the fourth lumbar vertebrae was observed on the standing direct abdominal X-ray. Abdominal tomography revealed the appearance of a foreign body in ileal loops. The patient underwent diagnostic laparoscopy. In the exploration, it was seen that there was a foreign body (wire part) perforating the bowel from two different places in the small bowel segment of 120 cm proximal from the cecum. Open surgery was decided. Two 10 cm wires were removed and the perforated areas were repaired. The patient was discharged without any postoperative complications.

**Case 2:** A 42-year-old female patient presented with dyspeptic complaints lasting for 3 months. Physical examination was normal except for epigastric tenderness. Blood count and biochemical parameters were normal in laboratory evaluation. Abdominal tomography revealed a foreign body in the pyloric region under the liver. Upper gastrointestinal endoscopy revealed a foreign body perforating the stomach in the prepyloric area. Laparoscopy was planned for the patient since endoscopy didn't work. Laparoscopic exploration revealed a foreign body (a piece of wire) that emerged from the stomach prepiloricum and extended to the hilus of the liver. The foreign body was removed laparoscopically and perforated area was closed. The patient was discharged without any postoperative complications.

**Conclusion:** Gastrointestinal foreign bodies are frequently seen in children and adults with mental problems. Generally, they are removed through passages without any intervention. In this study, foreign bodies, one in the stomach and one in the intestinal region, without creating an acute abdomen situation were presented.

**Keywords:** Gastrointestinal system, perforation, foreign body

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## PP-0468 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# A Rare Cause of Upper GIS Bleeding: Abdominal Aortic Graft Transmigrated to Duodenum

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**Introduction:** Upper gastrointestinal bleeding is observed in about 100 out of 100,000 people. It is often seen after the 5th decade. Approximately 10% are mortal. It is more common in men. Upper gastrointestinal system hemorrhage can manifest itself with hematemesis, melena, and rarely in very high-volume hemorrhages as hematoxia. Peptic ulcers are the most common cause of upper gastrointestinal bleeding. The ulcers are followed by erosive gastritis, esophageal varices and Mallory Weiss syndrome. Esophageal ulcer, aortoenteric fistula, hemobilia, erosive duodenitis, pancreatic hemorrhages are known for rare reasons. To share the transmigration of arterial graft to duodenum which we have determined as a rare GIS bleeding.

**Case:** 62 year old male patient had known diabetes mellitus and peripheral arterial disease (Buerger's disease). He had undergone aortobifemoral by-pass operation 6 years ago and his left toes were amputated 2 years ago. He had a history of smoking for 20 years. The patient was admitted to the emergency room with the complaint of bloody vomiting and was hospitalized by the gastroenterology unit. The patient, who was treated conservatively in the gastroenterology unit, was taken over by the general surgery unit because of her hemodynamic instability and massive bleeding. In the second part of the duodenum, an arterial graft material transmigrated to the duodenum lumen was observed in the operation. Cardiovascular surgical opinion was also obtained and duodenum wall was sutured on the graft and the operation was completed with Roux-en-Y gastrojejunostomy. Despite aggressive crystalloid and blood product resuscitation in the postoperative period, the patient died.

**Conclusion:** Upper gastrointestinal system bleedings are frequently followed in internal and surgical intensive care units. Transmigration of the arterial graft to duodenum should be considered in patients with a history of aortobifemoral by-pass and monitored for upper gastrointestinal bleeding.

**Keywords:** Arterial graft, duodenal hemorrhage, melena

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## PP-0469 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# A Difficult Situation to Decide: Chemotherapy? Tuberculosis Treatment?

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**Introduction:** Treatment of gastric cancer includes neoadjuvant chemotherapy±radiotherapy, surgical approaches and adjuvant chemotherapy±radiotherapy modalities. Stage and localization of the tumor, performance status of the patient and additional comorbid diseases play an important role in the treatment regulation of patients. Our aim is to present a case underwent surgery as a primary treatment modality, but had to be changed due to an unexpected pathology result such as tuberculosis that caused us change our point of view.

**Case:** A 75-year-old female patient was admitted to our clinic in November 2015 due to postprandial epigastric pain for 3 months and weight loss, morning phlegm, and cough in the last month. The patient had a 20-pack/year smoking habit in her history. In the examination of the patient, the general condition was moderate, cooperative and orientated; the patient was slightly cachectic. Her vital signs were normal, and his respiratory sounds were bilaterally reduced, and his abdominal examination did not show any pathology except for a slight reduction in skin turgor-tone. Hemogram, biochemistry and tumor markers were normal in the patient's laboratory values. At the endoscopy of the patient, 3 cm mucosal swelling and granular edematous appearance were present at the cardio-esophageal junction and a biopsy was taken from this region. The patient's pathology was reported as malignant epithelial tumor consistent with adenocarcinoma. Computed Tomography (CT) of the patient revealed bilateral calcific nodules and mosaic pattern in thorax; the wall thickening extending from the cardio-esophageal junction to the distal in the abdomen was present and lymph nodes in the periportal region were observed in the vicinity of the small curvature of the stomach. The patient was evaluated in the gastrointestinal system and a decision was made to conduct neoadjuvant treatment. The patient was taken for surgery because of her inadequate oral intake and she refused chemotherapy. Total gastrectomy+D2 dissection was performed. The patient was discharged on the 10th postoperative day without any complications. The surgical pathology of the patient was reported as Mixed Adeno-Neuroendocrine Carcinoma (MANEC). 24 reactive lymph nodes and 1 metastatic lymph node were detected in the surgical margin, which was evaluated as negative. Pathological examination of the D2 dissection material was reported as calcific granulomatous lymphadenitis. Medical oncology, infectious diseases and chest diseases unit were consulted. Sputum ARB was sent and the result was negative. The patient was evaluated as tuberculosis and the patient was given two month treatment of quadruple therapy (isoniazid, rifampicin, pyrazinamide, ethambutol) and 4 month treatment of double therapy (isoniazid, rifampicin) by tuberculosis dispensary. After the first two months of aggressive treatment, the patient was evaluated as in remission in terms of tuberculosis and chemotherapy was started. Both the anti-tuberculosis treatment and the chemotherapeutic treatment were completed. The controls are performed without any problems.

**Conclusion:** In patients who underwent resection due to gastric cancer and whose treatment algorithms need to be modified due to the presence of non-algorithm diagnoses in their pathology; It will be the most appropriate method to determine the profit/loss situation in the treatment to be applied to the patients as a primary principle and to draw up a treatment plan with a multidisciplinary approach.

**Keywords:** Stomach cancer, chemotherapy, anti-tuberculosis

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## PP-0471 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Surgical Treatment after Neoadjuvant Chemotherapy in Locally Advanced Stage Gastric Cancer; Short Term Results

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**Objective:** Surgical treatment after neoadjuvant chemotherapy (NACT) in locally advanced gastric cancer provides significant improvements in survival. Although these practices tend to increase in our country in recent years, the number of published studies is extremely low. The aim of this study was to evaluate the results of NACT+surgical treatment in locally advanced gastric cancer.

**Material and Methods:** Records of 42 patients with locally advanced gastric cancer who underwent NACT in Gazi University Medical Faculty General Surgery Department between January 2010 and January 2017 were evaluated. In preoperative staging, ultrasonography, tomography, MRI, PET tomography and staging laparoscopy when necessary were used. Docetaxel+cisplatin+5FU was applied as chemotherapy protocol. Locally advanced stage diagnosis was made according to the parameters: 18 patients had T, 10 had N and 14 had both parameters. 3 weeks after the NACT response was conducted radiologically, operation plan was made.

**Results:** The average age was 51 (26-65), and 22 patients were male and 20 were female. Tumor locations were: 24 cardia, 2 fundus, 5 corpus and 11 patients with antrum. In 27 patients who were accepted as local advanced stage, staging laparoscopy was performed with full radiological response. Laparoscopic findings were positive in 18.5% of the patients although their radiological results were negative. Surgical treatment was applied to 22 patients who had negative laparoscopic findings, limited resections were performed in 8 patients, total gastrectomy was performed in 14 patients and D1, D2 and D3 lymph node dissection were performed to 1, 18 and 3 patients respectively. Combined resections or additional organ resections were applied to 21% of the patients. Morbidity and mortality rates were 37% and 5%, respectively. Pathological complete response was seen in 29%

of patients, while partial responses in T or N were seen in 71% of patients. Adjuvant chemotherapy was applied to 9 patients and chemoradiotherapy was applied to 8 patients. The 3-year overall survival time was 46%.

**Conclusion:** Survival rates are increased with local surgery and adjuvant therapies after NACT in locally advanced gastric cancer. Effective NACT has a longer survival time especially in patients with pathological complete response and with appropriate surgical treatment with low morbidity.

**Keywords:** Stomach cancer, neoadjuvant chemotherapy, local advanced stage

## PP-0472 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Stump Appendicitis: Retrospective Analysis of 3130 Appendectomy Cases

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**Objective:** Stump appendicitis is defined as inflammation that occurs in the remaining tissue when the appendix is not completely removed. Even in cases with marked peritoneal irritation in the right lower quadrant, the diagnosis is usually delayed since it has a history of appendectomy, which leads to increased morbidity. In this presentation, we aimed to present stump appendicitis cases detected in Sakarya University Training and Research Hospital.

**Material and Methods:** The operations performed with the preliminary diagnosis of acute appendicitis at the General Surgery Department of the Training and Research Hospital of Sakarya University between January 2008 and November 2017 were retrospectively reviewed. The study included patients with a history of acute appendicitis who had a history of operation or reported as having stump appendicitis in the exploration.

**Results:** Of the 3130 patients who underwent appendectomy, 2710 (86.5%) were performed open and 420 (13.5%) were performed laparoscopic surgeries. Stump appendicitis was detected in 5 (0.15%) patients. Appendectomy history of these cases was 4,5,7,7 and 11 years ago. Four of the cases were male and 1 was female. The patients were diagnosed with an average of 36 hours after the onset of symptoms. Four (80%) of the appendectomies were treated open and 1 (20%) were treated laparoscopically.

**Conclusion:** Stump appendicitis is a rare complication after appendectomy and increases morbidity because it is diagnosed late. Therefore, keeping the stump appendicitis in mind in the differential diagnosis before radiological examinations may shorten the time in the decision-making phase and facilitate the correct diagnosis.

**Keywords:** Acute abdomen, appendicitis, stump appendicitis

## PP-0473 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

### Lymph Node Metastasis in Early Gastric Cancer

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**Objective:** Gastric cancer is the second most common cancer-related death after lung cancer, but there has been a reduction in mortality in recent years. The main treatment of gastric cancer is surgery. Currently selected early gastric cancer is also treated endoscopically. However, there are also cases of lymph node metastases in operated T1 tumors. We aimed to determine the factors affecting lymph node metastasis in early gastric tumors invading the lamina propria or muscularis mucosa (T1a) and submucosa (T1b).

**Material and Methods:** Patients with T1a and T1b tumor invasion who were operated for gastric cancer between 2010 and 2016 were included in the study. Postoperative pathology was divided into two groups with and without lymph node metastasis. Factors that might affect lymph node metastasis such as age-type, lymphovascular invasion (LVI), perineural invasion (PNI), tumor size, location, neutrophil, lymphocyte, monocyte, neutrophil/lymphocyte ratio, Lymphocyte/monocyte ratio, Neutrophil/monocyte ratio, total extracted number of lymph nodes was statistically compared.  $P < 0.05$  was considered significant.

**Results:** Lymph node metastases were detected in 17 (32%) of 53 patients who had been included in the study. Of the patients with lymph node metastases, 10 (57.8%) were male. Of the patients in the other group, 24 (36%) were male and 36 (66.6%) were female. The average age of the groups was  $56.6 \pm 9.4$  in the lymph node metastasis group and  $61.1 \pm 9.8$  in the other group. There was no difference between the groups in terms of age and gender. When the parameters were evaluated, it was seen that the possibility of lymph node metastasis was high in tumors with LVI and PNI ( $p < 0.05$ ).

**Conclusion:** T1 gastric cancer may cause lymph node metastasis. Therefore, patients should be evaluated well. Surgical treatment should be considered in tumors with lymphovascular and perineural invasion.

**Keywords:** Gastric cancer, lymph node, metastasis

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## PP-0474 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Effects of Chlorhexidine Gluconate-Impregnated Compress and Metronidazole-Impregnated Compress Usage on Intestinal Anastomosis in Peritonitis

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The risk of anastomosis leakage is higher in the large intestine than in other parts of the gastrointestinal tract because of the high number of pathogenic microorganisms and the high activity of the collagenase enzyme. In general surgery units, primary anastomosis is avoided, especially in interventions performed on left colon in the case of dirty abdomen in elective and emergency colon operations, and multi-step procedures are preferred. In this experimental study, we aimed to evaluate the use of abdominal compressions impregnated with chlorhexidine gluconate and metronidazole in the left colon anastomosis in peritonitis in order for the safety of anastomosis.

This study was performed on 21 Wistar-Albino type rats, divided into 3 equal groups, at the Experimental Research Center of Firat University. After midline laparotomy, the left colon was cut 2 cm above the pelvic peritoneum. For faecal contamination, the gaita in the lumen was smeared around the wound. Then, the abdomen was closed on two layers (fascia and skin) with 3/0 silks. After 1 day, the abdomen was reopened under general anesthesia. Before starting the colon anastomosis, the rats in the 1st group were rinsed with isotonic sodium chloride impregnated material and double-layer anastomosis was performed. In the second group, double-layer colon anastomosis was applied by cleaning the abdomen using metronidazole impregnated material. In the third group, an anastomosis was applied to the abdomen with chlorhexidine gluconate impregnated material. Tissue hydroxyproline level and anastomosis burst pressures were measured and histopathological evaluation was performed on the postoperative 10th day via relaparotomy. The average value of the anastomotic bursting pressure was highest in Group III ( $p < 0.05$  Group I-III, Group II-III). Tissue hydroxyproline level was highest in Group III ( $p < 0.005$  Group I-III, Group II-III). When histopathological findings were evaluated in three groups, there was no significant difference between Group II and Group III in terms of improvement score in intestinal tissue and there was a statistically significant difference between Group I and improvement scores in both groups ( $p < 0.005$ ). As a result, the use of material impregnated with antibacterial solution in peritonitis increased the safety of anastomosis in primary anastomosis.

**Keywords:** Peritonitis, colon anastomosis, chlorhexidine gluconate, anastomosis leak

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## PP-0475 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Meckel Diverticulum Perforation of the Ileus in a Patient with Sigmoid Colon Cancer

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Meckel's diverticulum is the most common congenital anomaly of the gastrointestinal tract and is a true diverticulum. While there may be life-threatening complications such as bleeding and obstruction in childhood, it can rarely be detected during



imaging or laparotomy in adults. In adults, very rare complications are observed and can cause serious life-threatening health problems. In this case, a case of meckel diverticulum perforation with sigmoid colon cancer has been presented.

A 62-year-old male patient presented to the emergency department with extensive abdominal pain, swelling in the abdomen and inability to remove gas-stool for 3 days. The patient had undergone medical treatment with the diagnosis of advanced sigmoid colon cancer. He had abdominal distention, defense, rebound tenderness in all abdominal quadrants and in his rectal palpation ampullary was empty. As a result of blood tests and imaging methods, laparotomy was performed for emergency diagnostic purposes with the preliminary diagnosis of intestinal perforation. In the operation, widespread enteric content was observed in the abdomen, meckel diverticulum perforation was observed in the ileum. 6mm mass that did not allow passage in sigmoid colon was seen. Ileum segmenter resection was performed and ileostomy was opened and abdominal lavage was performed. The patient was discharged on the post-op 4th day. Meckel's diverticulum usually becomes symptomatic before the age of 2 years. The most common complication before the age of 20 years is bleeding and the most common complication over 40 years of age is obstruction. Diverticulitis is one of the most common complications and occurs as a result of obstruction generally with fecaloid. The treatment approach in symptomatic cases is surgery. In asymptomatic cases, Soltero performed surgery very rarely, while Schlicke and Johnston proposed the removal of the randomly observed Meckel Diverticulum. In cases of intestinal obstruction, perforation is usually expected in the cecum, while meckel diverticulum is also a risk factor for perforation. Excision of the meckel diverticulum, which is incidentally detected during laparotomy, can be considered.

**Keywords:** Ileus, meckel diverticulum, sigmoid colon cancer

PP-0476 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## Comparison of the Effects of Longitudinal Gastrojejunostomy Surgery on Malabsorption in Rats with Short Bowel (Experimental Study)

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**Objective:** Short bowel syndrome (SBS) is a clinical condition characterized by malabsorption and subsequent malnutrition following extensive intestinal resection. TPB, which is the most important weapon used in its treatment, is not a treatment method that can be applied indefinitely due to its technical difficulties, its non-economic nature and its various complications. The aim of this study was to investigate the effect of longitudinal gastrojejunostomy on the histopathological and biochemical parameters in rats via massive intestine resection (80%).

**Material and Methods:** Our study was conducted Bağcılar Training and Research Hospital, Experimental Investigation and Skills Development Center (BREISDC) were performed. In our study, the average weight of 190-260gr (average 220 g.) 24 adult Wistar Hannover rats were used. 3 groups were formed in each group with 8 animals. Group 1: Sham group, Group 2: control group with formed short bowel syndrome, Group 3: group with formed short bowel-longitudinally jejunostomy group. Each subject was weighed and recorded preoperatively and on the postoperative 21st day. Relaparotomy was performed on the postoperative 21st day. Biochemical parameters (AST, ALT, calcium, magnesium, iron, albumin, glucagon like peptide-2, vitamin-B12) were measured by cardiac blood puncture (4-5 cc). Anastomosis line was resected, the development of intestinal metaplasia in terms of adaptation were taken for histopathological evaluation.

**Conclusion:** In this experimental study, weight loss was lower and GLP-2 value was measured higher in SBS rats with antiperistaltic, longitudinal gastrojejunostomy. In this respect, our study is a pilot study. Our study should be supported by advanced clinical studies.

**Keywords:** Intestinal adaptation, short bowel syndrome, longitudinal gastrojejunostomy

PP-0477 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

## Inflammatory Fibroid Polyp-Induced Invagination: Two Case Reports

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**Introduction:** Although invagination is mainly seen in the pediatric age group, there are cases in the adult age group.

**Case 1:** A 33-year-old male patient was admitted to the emergency department with complaints of nausea and vomiting that started a few hours ago. The patient had been suffering from constipation and occasional abdominal pain for several months and therefore receiving palliative medical treatment. There was no history of additional disease, drug use history and operation other than hypertension. On physical examination (PE), there was tenderness around the umbilicus and right lower quadrant, and abdominal defense and distention. Laboratory values were within normal limits. Abdominal computed tomography (CT) revealed an invaginated bowel segment of 8 cm in the right lower quadrant and thought to be benign mass lesion of 41x33 mm in size on the edge. Urgent operation was planned. In the laparotomy, the proximal small intestines were dilated, and a mass of 4x3cm at 80 cm to the ileocecal region, and approximately 10 cm of small intestine loops was found to have invagination (Figure 1, 2). Segmentary small bowel resection and end-to-end anastomosis were performed. The patient started oral intake on the 3<sup>rd</sup> postoperative day and was discharged on the 5<sup>th</sup> postoperative day without any problems. The pathology result was reported as inflammatory fibroid polyp (IFP).

**Case 2:** A 77-year-old male patient presented to the emergency department with complaints of abdominal pain, nausea and vomiting which started a day ago. He had a history of HCV, arrhythmia and heart failure, and a history of drug use related to these diseases. It was learned that the patient had been operated for choledocholithiasis. There was tenderness around the umbilicus, defenses and abdominal distention. The laboratory values were CRP 5 mg/dl and leukocyte was 14330/mgL. Abdominal CT revealed a dilatation and air-fluid levels which reached 62 mm in the proximal small intestine segments and invaginated intestine loop in the 7 cm segment of the right lower quadrant of the abdomen. The operation was recommended to the patient. Laparotomy revealed a 5x4 cm mass at 50 cm from the ileocecal region and a 7-8 cm segment invagination, proximal dilatation of the proximal segment. The patient was recommended operation. Laparotomy revealed a 5x4 cm mass at 50 cm from the ileocecal region and that segment approximately with 7-8 cm was forming invagination, and proximal loops had dilatation. Segmental small bowel resection and end-to-end anastomosis were performed manually. After the operation, the patient was intubated and admitted to the intensive care unit. On the postoperative 1<sup>st</sup> day he was extubated and the second day he was taken to the service. Although he had respiratory problems in postoperative period, his general condition recovered. He started oral intake on the postoperative 5<sup>th</sup> day and was discharged on the 11<sup>th</sup> postoperative day. Pathology was reported as IFP.

**Conclusion:** Invagination may occur in the adult age group depending on the masses. One of these masses is IFP. Although IFP can be seen all over the gastrointestinal tract, stomach is the most common. Small intestine localized IFPs are frequently encountered, as is the case with the patients presented. It is a benign lesion of submucosal origin. Its etiology is unknown. They may cause gastrointestinal bleeding. They may cause ileus and invagination. Invagination and accompanying masses should be kept in mind in adult patients with ileus.

**Keywords:** Inflammatory fibroid polyp, small intestine, mass, invagination, ileus

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## PP-0478 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)]

# Emergency Gastrectomy in Gastric Cancer: The Importance of R0 Resection

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**Objective:** Massive bleeding and perforation due to gastric cancer require urgent surgical intervention. However, the required major surgical procedure in emergency conditions is associated with high morbidity and mortality due to the fact that patients are usually older and their hemodynamics are not stable. In this article, we aimed to present the treatment and follow-up results of patients who underwent emergency gastrectomy for gastric cancer.

**Material and Methods:** The files of 18 patients who underwent emergency gastrectomy for gastric cancer-related hemorrhage and perforation at İzmir Katip Çelebi University Atatürk Training and Research Hospital General Surgery Clinic between January 2007 and January 2017 were evaluated retrospectively. The demographic characteristics of the patients, surgery and pathology data and surgical complications were recorded based on patient files and database information. Mortality data of the patients were screened by the population registration system as of February 2018. Demographic data, operation indications, operative data and pathology results were evaluated. Follow-up and survival time of the patients were recorded.

**Results:** The average age was 60.6±15.1 (27-86). 16 (88.8%) of the patients were male and 2 (11.2%) were female. The surgery indication in 12 (66.7%) patients was tumor bleeding, and tumor perforation in 6 (33.3%) patients. The procedure was total gastrectomy in 8 patients (44.4%) and distal in 10 (55.6%) patients. Pathology was reported to be neuroendocrine tumor in 1 (5.6%) patient, lymphoma in 1 (5.6%) patient and adenocarcinoma in 16 (88.8%) patients. In 7 (38.9%) of the patients, resection without resection (R0) was observed. The average tumor size was 8±3.7 (3-18) cm. Lymph node metastasis was seen in 13 (72.2%) of 16

(88.8%) patients who had lymph node dissection. While 7 (38.9%) patients died in the perioperative period, the average survival time was  $19 \pm 12.4$  (5-51) months in 11 (61.1%) patients who were discharged. Average survival was  $16.5 \pm 8.4$  (1-29) months in patients who underwent R0 resection, and for patients undergoing R2 resection it was  $3.66 \pm 5.02$  (1-16) months ( $p < 0.05$ ).

**Conclusion:** Massive bleeding and perforation due to gastric cancer are the pathologies that require urgent surgery and with high perioperative mortality due to the general condition of the patient. However, R0 resection significantly improves survival compared to patients with residual tumor.

**Keywords:** Emergency gastrectomy, gastric cancer, tumor bleeding, tumor perforation

## PP-0479 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Rare Complication of Subtotal Gastrectomy: Remnant Stomach Cancer

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**Objective:** Remnant gastric cancer (RGC) is a gastric cancer that develops in patients at least 2 years after undergoing subtotal gastrectomy for benign or malignant reasons. In this article, we aimed to present the treatment and follow-up results of patients who underwent gastrectomy for remnant gastric cancer.

**Material and Methods:** The files of 14 patients who were operated for RGC at İzmir Katip Çelebi University Atatürk Training and Research Hospital General Surgery Department between January 2007 and January 2017 were retrospectively analyzed. The demographic characteristics, operation and pathology data of the patients were recorded based on patient files and hospital database information. The mortality data of the patients were screened from the population registration system as of February 2018. Demographic data, operation indications, operative data and pathology results were evaluated. Follow-up and survival time of the patients were recorded.

**Results:** The average age was  $65.85 \pm 9$  (50-82). Twelve (85.8%) of the patients were male and 2 (14.2%) were female. Malignancy was in the gastroenterostomy line in 9 (64.2%) of the patients and in 5 (35.8%) of the proximal stomach. Three patients (21.4%) had a history of subtotal gastric resection for gastric cancer and 11 (78.6%) patients had a history of previous peptic ulcer surgery. The initial postoperative RMC emergence time was  $32.5 \pm 18$  (2-54) years. The average tumor size was found to be  $4.1 \pm 2$  (1.5-8) cm. 7 patients (50%) had lymph node metastasis. Perioperative mortality was seen in 2 (14.2%) patients, while the average survival time for 12 patients who were discharged was  $26.1 \pm 15.8$  months.

**Conclusion:** In patients with a history of subtotal gastric resection or with a known history, malignant tumors can be seen, especially in the gastroenterostomy line. In this respect, it is important for routine endoscopic screening, detection of patients in the risk group and detection of RMC at an early stage even after many years of known gastric surgery.

**Keywords:** Gastric cancer, peptic ulcer, remnant stomach, subtotal gastrectomy

## PP-0480 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Late and Fatal Complication of the Nissen Fundoplication: Gastric Volvulus

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Organoaxial gastric volvulus is a rare complication following gastric operations. A 47-year-old female patient underwent Nissen fundoplication for Hill Grade 4 Hiatal hernia and gastroesophageal reflux. Gastric volvulus was detected in the postoperative 5th month in the patient who presented with acute abdomen. Exploration was performed. The patient had an organoaxial stomach rotation and the stomach was going totally necrosis. After total gastrectomy, the septic condition did not regress and anastomotic leakage occurred. The patient was followed up with luminal and intraabdominal drainage after reoperation. The patient died due to sepsis on the postoperative 16th day. We will share this rare complication in the literature.

**Keywords:** Nissen fundoplication, gastric volvulus, stomach necrosis

## PP-0481 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Analysis of Hemogram and CRP Parameters in Patients with Congenital Appendectomy

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**Objective:** It is known that there are some difficulties in the diagnosis and treatment of acute appendicitis in pregnant women. Anamnesis, physical examination and laboratory findings are important in the diagnosis. In this study, it was aimed to investigate CRP values with hemogram parameters and predictive values of appendicitis diagnosis.

**Material and Methods:** 38 patients who underwent emergency appendectomy with the prediagnosis of acute appendicitis between January 2010 and May 2016 were evaluated retrospectively. Age, gestational week, hemoglobin, leukocyte, neutrophil, lymphocyte, platelet, C-reactive protein (CRP), neutrophil/lymphocyte, platelet/lymphocyte, leukocyte/CRP, neutrophil/CRP, leukocyte + CRP, neutrophil + CRP values and histopathological results were investigated. According to the pathology results, three groups were determined. Group I: acute appendicitis, Group II: perforated appendicitis, Group III: normal appendix (pathology: lymphoid hyperplasia). In the analysis of the data, SPSS for Windows version 24.0 statistical program was used,  $p < 0.05$  was taken for statistical significance.

**Results:** The average age of the patients (O): 28,8; gestational week (O): 19,2; leukocyte (O): 13.3 10<sup>3</sup>/uL; left shift (neutrophilia) (O): 78.8% 10<sup>3</sup>/uL; CRP (O): 6.3 mg/dL; neutrophil/lymphocyte ratio: 8,0; platelet/lymphocyte ratio: 184,9; leukocyte/CRP ratio: 11,9; Neutrophil/CRP ratio: 9,2; leukocyte + CRP total: 20,1; Neutrophil + CRP total: 17,4; Group I: 26 patients with acute appendicitis (68%), Group II: 4 patients with perforated acute appendicitis (10%), Group III: 8 patients (21%) with lymphoid hyperplasia. There was no significant difference between Group I and Group III when compared in terms of CRP values ( $P=0,750$ ); Significant differences were observed between Group II and Group III ( $P=0,022$ ), between Group I and Group II ( $P=0,017$ ). Leukocyte values were statistically significant between the Groups I, II, III ( $P=0,013$ ), leukocyte/CRP ratio ( $P=0,001$ ), leukocyte + CRP total ( $P=0,009$ ), neutrophil + CRP total ( $P=0,018$ ).

**Conclusion:** (AA), except obstetric emergencies, is the most common cause of acute abdomen in pregnant women. Perforated appendicitis rate, morbidity and mortality increase with the difficulties/delays in diagnosis and treatment; With the threat of premature birth/miscarriage, the life of the patient and the fetus is put at risk. Anatomical, physiological and laboratory changes during pregnancy make the differential diagnosis difficult. The displacement of the appendix with the growth of the uterus limits the value of USG in the diagnosis, and tomography is inconvenient in the pregnant woman. Diagnostic tools are history, physical examination, laboratory and USG. In this study, CRP in perforated appendicitis; leukocyte, neutrophil, leukocyte/CRP ratio, leukocyte + CRP and neutrophil + CRP levels were significantly higher in acute and perforated appendicitis. We believe that in the diagnosis of pregnant women (AA) and complicated/perforated (AA); in addition to leukocyte, neutrophil, CRP, "leukocyte/CRP ratio, leukocyte + CRP and neutrophil + CRP total" will be useful. The data in this study were used at the 11<sup>th</sup> National Trauma and Emergency Congress held in Antalya on April 5-9, 2017 with the title of 'Evaluation of Appendectomy in Pregnant Patients' with report number 0298.

**Keywords:** Appendicitis, CRP, pregnant, leukocyte, neutrophil

## PP-0482 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Use of Bougie During Placing Anvil in Esophagus in Laparoscopic Total Gastrectomy Procedure

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Since it was first reported by Kitano et al., Laparoscopic distal gastrectomy (LDG) (laparoscopy-assisted or total laparoscopic) has been widely used in the treatment of early gastric cancer in the Far East countries.

Laparoscopic total gastrectomy (LTG) procedure is becoming more common with the help of LDG as well as technology and experience. However, there are technical difficulties in performing an esophagojejunostomy anastomosis after LTG. Due to the limited work area and lack of experience, the placement of anvil and performing distal suture in the distal esophagus is still problematic.

Various techniques and tools have been reported for intracorporeal esophagojejunostomy. One of them, OrVil, can be a bit complicated and time consuming for inexperienced surgeons as well as increasing costs. Double stapler technique described by Kim et al. is a reliable technique that can be applied quickly. However, in this technique, technical difficulties are experienced during the withdrawal of the esophagus below from the opening to be formed with the help of the rope attached to the end of the anvil after being cut via endoscopic linear cutter-sealer stapler.

In this article, we aimed to describe a new technique that we applied in our own clinic.

In order to prevent the distal esophagus from escaping into the mediastinum, in the position of the lithotomy through entering appropriate ports, after the laparoscopic total gastrectomy + D2 dissection was completed, the sutures were placed on both sides of the esophago gastric junction to the cruses. A 3-cm mini laparotomy was performed from the epigastric area. The anvil of the 28 mm intraluminal stapler device was removed and a 10 cm prolene suture was ligated to the end. Again, the laparoscopy procedure was continued and anvil was pushed through distal esophagus from the gastrotomy area 1 cm below the OGB. The resection was then closed using endo-GIA stapler and discontinued. At this stage, the plan was, as described by Kim et al., the removal of the prolene suture and placing the anvil on the cut esophagus, but since the prolene suture was also cut during the stapler cut, the procedure could not be conducted. 36 Fr bougie that we use in oral vertical sleeve gastrectomy procedure was sent gradually and the anvil was pushed in the distal esophagus, opening was created through the end of esophageal incision spot with the help of hook koter. Anvil was placed securely. Roux-n-y esophagojejunostomy was applied smoothly. In the case of LTG + Roux-n-y esophagojejunostomy procedure, we believe that it may be possible to place the anvil in a safe way by inserting the bougie orally in addition to the double stapler method described in the insertion of anvil into the incised esophagus line. We believe that more surgical experience and clinical studies are needed to achieve more accurate results.

**Keywords:** Laparoscopic total gastrectomy, Roux-N-Y esophagojejunostomy, anvil, bougie

## PP-0483 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Esophageal Surgery Techniques

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**Objective:** Esophagectomy is one of the problematic areas of surgery due to morbidity and mortality. There are differences between surgical types and length of hospital stay and number of complications. Esophagectomies performed in our department were analyzed retrospectively. We compared the transhiatal esophagectomy + gastric pull-up (TH) technique with the others.

**Material and Methods:** 34 patients who underwent general surgery at İstanbul Training and Research Hospital between the years of 2007-2018 were examined. Distal esophagectomy cases added to gastrectomy due to gastric cardia cancer and physicians who did not want their cases to be included were excluded from the study. Of the esophagectomy cases, 31 were operated due to esophageal cancer, 2 patients were operated due to hypopharyngeal cancer and 1 patient was operated due to achalasia.

**Results:** Of these, 14 were performed transhiatal esophagectomy + gastric pull-up technique (50% female, 50% male), and 20 of them underwent Ivor-Lewis or McKeown-type esophagectomy + reconstruction (Average age 55). The duration of hospital stay in hospital for TH was 18 days, 21 days for MK-IL ( $p=0.6891$ ). Fistula developed in one of the patients who had undergone TH for postoperative complications on the 6th postoperative day. And on the 10th day, it spontaneously closed and no other complications were observed. Complications were observed in 10 patients in the MK-IL group (pneumothorax (1), fistula (1), anastomosis stenosis (8)) ( $p=0.0101$ ). One patient died in both groups.

There was a significantly lower complication in the TH group in terms of early complications. In terms of hospital stay duration, no significant difference was detected in the TH group ( $p=0.6891$ ).

**Conclusion:** When acute complications and duration of hospitalization were compared, TH esophagectomy is seen as an advantageous technique. Lack of adequate lymph node dissection in terms of cancer surgery is a disadvantage for TH esophagectomy, but it is still used in terms of esophagectomy technique and it has been found to be more advantageous in this study in terms of early complications.

**Keywords:** Esophagus, esophagectomy, transhiatal esophagectomy, gastric pull-up

## PP-0484 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] A Case of Giant Gastric Bezoar Extending to Duodenum

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**Introduction:** We aimed to present a case of giant gastric trichobezoar detected and treated in an 18-year-old woman who presented with nausea, vomiting, epigastric pain and abdominal mass.

**Case:** In her history, the patient described trichophagia and trichotillomania for four years. On her physical examination, she had no tachycardia, hypertension or fever. There was a palpable mass extending from the epigastrium to the suprapubic region in her abdominal examination. Blood results were as follows: wbc: 17000, crp: negative. Abdominal tomography revealed a well-circumscribed, multilayered, heterogeneous, solid lesion extending from the gastric fundus to the pyloric duct and from there to the duodenum.

The patient underwent endoscopy with a preliminary diagnosis of giant trichobezoar but bezoar could not be removed. Minilaparotomy was performed. A severely dilated stomach extending to the pelvis was observed in the abdomen.

Bezoar was removed as an enbloc via gastrotomy. Stomach was repaired on double layers. In the postoperative period, the patient moved to full oral intake without any complications and was discharged. Her parents were also recommended that the patient should be monitored by the psychiatry department. At the first month of follow-up, esophagoduodenoscopy was evaluated as normal.

**Discussion:** Trichobezoars are mostly localized in the stomach. However, as in our case, they may sometimes extend to the duodenum or small intestine. This condition, known as Rapunzel Syndrome, may cause complications such as intestinal obstruction, gastrointestinal perforation, and pancreatitis. It is typically seen in girls below the age of 18 years with trichotillomania and trichophagia and is accompanied by an acute abdomen.

**Conclusion:** Bezoar is one of the rare pathologies and should be considered in the differential diagnosis in young female patients presenting with abdominal mass and acute abdomen. In these patients, trichophagia and trichotillomania should absolutely be questioned.

**Keywords:** Bezoar, trichophagia, trichotillomania, Rapunzel syndrome

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## PP-0485 [General Surgery Diseases]

# Endometriosis Located in Rectus Abdominis Muscle, Case Report

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Endometriosis is defined as the presence of endometrial tissue outside the uterine tissue. Although ectopic endometrial tissue is frequently located in the pelvis, it can also be found in other body regions. Abdominal wall endometriosis originate from endometrium gland and stroma which may develop in the incision tissue after laparoscopic gynecological interventions and cesarean section. The diagnosis of incisional endometriosis is often based on anamnesis and physical examination. Here, we report a case of endometriosis located postoperatively in the rectus abdominis muscle in a patient who had a cesarean delivery 2 years ago. A 21-year-old female was admitted to our outpatient unit with a history of cesarean section 2 years ago with the complaints of colic pain in the left lower quadrant of the abdomen, severe pain during menstruation periods and palpable swelling. On physical examination, a hard mass was palpated on the cesarean incision. Abdomen USG revealed a heterogeneous internal solid structure with a diameter of 18x11 mm in the left lower quadrant paracentral rectus muscle. MRI revealed T1A isointense-like lesion at the pelvic entrance level, in the abdominal wall located on the left side of the rectus muscle, 30x22x13mm in size, mild hyperintense according to T2 muscle. Total mass excision was performed. The patient was discharged from the hospital without any complication. The pathology of the total excised mass was consistent with endometriosis. Endometriosis is the presence of ectopic endometrial tissue outside the uterine cavity. Ectopic endometrial tissue is usually located in the pelvis; but can be seen in extrapelvic eye, kidney, surrenal, lung, bowel, umbilicus, diaphragm, gallbladder, heart, liver, bone, peripheral and central nervous systems and skin. Although endometriosis of the primary abdominal wall is rare, it usually consists of endometrial gland and stroma, which may develop in the incision scar tissue after gynecological interventions especially in the caesarean section and hysterectomy, episiotomy, tubal ligation, laparoscopic trocar entry or amniocentesis. There are theories about the placement of endometrial tissue outside the uterus. These are; cellular immunity, aerosolization, coelomic metaplasia, retrograde menstruation, venous and lymphatic metastasis and mechanical implantation. Endometriosis of the abdominal wall can also be seen without gynecologic intervention, it is believed that endometriosis developed after such cases is caused by the transfer of previously intraperitoneal endometriosis to the surgical incision. In gynecological interventions, we reduce endometrial tissue transplanted and mechanical transplanted by protecting the surrounding tissue. With the increase of laparoscopic surgical procedures, the incidence of endometriosis in the abdominal wall and trocar space has increased. We can reduce the incidence of abdominal wall and trocar endometriosis secondary to laparoscopic interventions by using endobag in the removal of the operation specimen, wound protector in the incision site, appropriate surgical techniques when closing the abdomen and by irrigation of the incision site. The presence of cyclic pain in a mass associated with cesarean scar is pathognomonic for abdominal endometriosis and the removal of the mass with wide excision is the recommended treatment approach. The incidence of en-

dometriosis in the abdominal wall and trocar space secondary to increased laparoscopic interventions can be reduced by using endobag in the removal of the operation specimen, wound protector in the incision site, appropriate surgical techniques when closing the abdomen and by irrigation of the incision site.

**Keywords:** Incisional endometriosis, gynecological intervention, mechanical implantation, aerosolization, coelomic metaplasia

## PP-0487 [General Surgery Diseases]

# A Case Report of Extraskeletal Retroperitoneal Chondrosarcoma

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Chondrosarcomas usually originate from cartilage tissue. The extraskeletal origin is rare and there are cases defined in the head and neck region (including the brain and meninges), the retroperitoneum and the extremities. There are two subtypes of extraskeletal mesenchymal chondrosarcomas (ESMC) as those with central nervous system origin and with muscle-soft tissue origin. ESMCs with muscle-soft tissue origin are less common and they are frequently located in the lower extremities. Here, we present a case originating from the lateral wall of the abdomen and displaying retro-intra-peritoneal extension. The diagnosis and treatment process of a 39-year-old male patient, who was diagnosed with chondrosarcoma by an external center where he consulted due to abdominal mass that had begun to grow suddenly 6 months before and then referred to our department, was presented.

**Keywords:** Chondrosarcoma, mesenchymal tumor, retroperitoneum

## PP-0488 [General Surgery Diseases]

# Diffuse Large B Cell Lymphoma Confusing with Gluteal Sebaceous Cyst: A Case Report

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**Introduction:** Diffuse large B-cell lymphomas (DLBCL) are the most common type of all non-Hodgkin lymphomas and constitute 60% of them. The incidence of DLBCL, which forms the largest subgroup of NHLs, is around 2.9/100000 per year. It is most commonly observed in the 5th and 6th decades. Approximately 30-40% of DLBCLs, which may exhibit either nodal or primary extranodal involvement, primarily arise from the extranodal regions. Paranasal sinus involvement is the most common, which is followed by the central nervous system, gastrointestinal system, testis, lung and eye involvement, respectively. Skin involvement is rarely seen with the rate of 6%. In this case, we aimed to present a patient who was performed excision for the pre-diagnosis of sebaceous cyst in the gluteal region and whose pathological evaluation was reported as DLBCL.

**Case:** A 77-year-old female patient was admitted to our outpatient clinic with the complaint of palpable swelling in the right gluteal region. In the examination, a lesion consistent with infected sebaceous cyst was observed. In the anamnesis, it was learned that the lesion had been present for about 2-3 months and pain and temperature increase began in the last 2 days. When her history was questioned, it was found that she had diffuse large B cell lymphoma in remission. In the analyses of the patient, Wbc was 11.000 (4-11 103/μL); Hgb was 10.8 (11-18.8 g/dl); and Plt was 412.000 (150-400 103/μL). Routine biochemistry evaluation of the patient was normal and there was no pathological finding in the PA X-ray. In the gluteal superficial ultrasonography, the thickness of the subcutaneous fat tissue and echo were increased in the area where the lesion was located. Because these findings were evaluated in favor of infective change, excision was planned for the patient. She was discharged with recommendations after performing excision under local anesthesia. In the pathological evaluation of the patient, the diffuse neoplastic lymphocytic infiltrate positivity showing locally nodular pattern in the dermis was reported to be consistent with diffuse large B cell lymphoma. With these findings, the whole abdomen Pet CT was performed for re-staging. No pathological SUV involvement was observed. The patient was referred to the department of hematology.

**Conclusion:** Lymphoma is a type of cancer formed by lymphocytes. It is a general name given to the malignant tumor of lymph tissue. Malignant lymphoid cells also proliferate in the lymph nodes, spleen, bone marrow, blood and other organs as normal

lymphocytes. Lymphomas are divided into two major groups as Hodgkin lymphoma (HL) and non-Hodgkin lymphoma (NHL). NHL is divided into 2 groups as B cell lymphomas originating from abnormal B lymphocytes and T cell lymphomas originating from abnormal T lymphocytes. They are classified as low grade, moderate grade and high grade. DLBCL is involved in the high-grade group and has an aggressive course. After demonstrating that chemotherapy with 3-4 cycles of CHOP (cyclophosphamide, doxorubicin, vincristine, prednisone) and radiotherapy on the affected area have extended the lifetime, they have been accepted as the standard treatment method. In cases with recurrence after remission, the stem cell-based DHAP protocol consisting of dexamethasone, cytarabine and cisplatin should be added to the treatment.

**Keywords:** B-cell Lymphoma, infected sebaceous cyst, cutaneous involvement

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## PP-0489 [General Surgery Diseases]

# Psoas Abscess Developing Secondary to Brucellosis

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Although the etiology is not known exactly in Psoas abscess, it is caused by a lymphogenic or hematogenous spread of microorganisms from an undetected focus in the body. The patients usually present with abdominal pain, side pain, weakness, fever, sweating, weight loss, limping, and back and leg pain. Staphylococcus aureus is the agent that is most commonly found in the abscess cultures. In this case report, we present the right psoas abscess developing secondary to Brucellosis, which is a rare cause.

A 70-year-old male patient was referred to our clinic by an external center where he had applied for the complaints of fever and pain radiating to the right hip, right leg and gluteal region. He had a fever of 37.8°C. The abdominal CT taken for abdominal and right side pain revealed a lesion consistent with right psoas abscess. Firstly, percutaneous drainage with USG was planned for the patient who was consulted with the Department of Interventional Radiology. However, because the abscess formation in the deep psoas had multiple septa, only diagnostic puncture was performed. Brucella growth was detected in the culture of the puncture material.

Acid-resistant bacilli (ARB) and polymerase chain reaction analyzed in the abscess material for tuberculosis were found to be negative. No growth was observed in the culture for tuberculosis. The antibiotherapy of the patient for brucellosis was planned and initiated by the department of infectious diseases. Because his pain did not heal under antibiotherapy, control abdominal CT was requested. It was observed in the CT that the abscess localized in the right psoas was progressed compared to the previous size. Because the present abscess of the patient had multiple septa and no regression, it was operated for drainage. Postoperative hemodynamics of the patient was stable and he was discharged after removing the drain.

Although the etiology is not known exactly in psoas abscess, its incidence is three times higher in males than females. Its localization is seen as the right side (57%), left side (40%), and bilateral side (3%). Patients usually present with the complaints of abdominal pain, side pain, weakness, fever, sweating, weight loss, limping, and waist and leg pain. Staphylococcus aureus is the most commonly detected agent in the abscess cultures. Escherichia coli, Pseudomonas aeruginosa, Mycobacterium tuberculosis and rarely Brucella species are also detected. Due to its proximity to the Psoas muscle, it may develop secondary to the infectious diseases of the gastrointestinal system, skeletal system and retroperitoneal organs. In secondary psoas abscesses, Crohn's disease is the most common disorder with the rate of 60%. Other accompanying causes include appendicitis (16%), colon diseases (inflammation, ulcerative colitis, diverticulitis and tumors) (11%), disc infections and osteomyelitis (10%), perirenal infections, pyonephrosis, postoperative factors, foreign body complications, and tuberculosis.

Antibiotherapy and abscess evacuation should be used together in the treatment of Psoas abscess. Due to its being minimally invasive, USG or CT-guided percutaneous abscess drainage and accompanying antibiotherapy are the most preferred treatment modalities in psoas abscesses. In conclusion, although brucella bacteria are rarely seen in cases with psoas abscesses, they should be considered to affect and necessary examinations should be done for the diagnosis of brucellosis in these patients.

**Keywords:** Psoas abscess, percutaneous drainage, surgical drainage, brucellosis, crohn

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## PP-0490 [General Surgery Diseases]

# A Rare Case of Desmoid Tumor Invasive to the Pelvic Bone

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**Introduction:** Desmoid Tumor (DT) is a rare, benign tumor with a high tendency to infiltrative growth and recurrence after local excision without metastasis. Its frequency is three times higher in women. Two thirds of the patients are between the ages of



20 and 40 years. It can be associated with FAP, Gardner syndrome, trauma, hormonal imbalance and previous surgeries. DTs are usually solitary and they are multiple in 10-15% of cases. DT is a locally invasive form of fibromatosis, accounting for only 0.03% of all fibromatoses. It can develop in the extremities, chest wall, abdominal wall and intraabdominal tissue. Imaging studies such as computed tomography (CT) and magnetic resonance (MR) are performed for preoperative diagnosis and surgery planning. Complete surgical resection is the first treatment option with a negative pathological border and careful follow-up is recommended because of its high recurrence rate.

**Case:** A 22-year-old female patient without any systemic disease was admitted to our hospital with the complaint of abdominal pain that was intermittently going on for the last one month. She had a history of caesarean section operation 7 months ago and her physical examination revealed a palpable giant mass with tenderness in the suprapubic area. Her laboratory values and tumor markers were within normal intervals. In CT, there was a well-circumscribed 98x79x90 mm solid mass including the rectus muscle at the anterior of the bladder, having close neighborhood with bilateral pubic bone, and displaying subcutaneous extension. The operation decision was taken and the mass was reached by passing the skin and subcutaneous area with the previous Pfannenstiel incision. The mass being approximately 10x8x9 cm in size, involving the rectus muscle, and invading to the pubic bone was completely resected with partial bone resection. The patient well-tolerated the operation and was discharged on the 6th postoperative day. Histopathological examination of the mass was reported as morphology consistent with deep fibromatosis (desmoid tumor). The lesion is infiltrated in focal areas to the surrounding fat, muscle and bone tissue.

**Discussion:** DT is a rare benign tumor that has a high tendency to infiltrative growth and recurrence after local excision, but does not metastasize. The female to male ratio is 3: 1. Two thirds of the patients are between the ages of 20 and 40 years. Its etiology includes FAP, Gardner syndrome, trauma, hormonal imbalance, and previous operations. DTs are usually solitary, but they are multiples in only 10-15% of cases. The DTs display a great growth before they become symptomatic. For preoperative diagnosis and surgery planning, imaging techniques such as CT and MRI are performed. Although its invasion to the bone structure is very rare, sporadic cases are present as in our case. In such cases, complete surgical resection with clean pathological margins is the primary treatment and careful follow-up is recommended because of the high recurrence rate.

**Conclusion:** As in our case, DT may be invasive to the bone and complete resection of the desmoid tumor with partial bone resection can be used as a treatment option.

**Keywords:** Giant desmoid tumor, deep fibromatosis, bone invasion

## PP-0491 [General Surgery Diseases]

# Necrotizing Fasciitis After Intramuscular Self-Injection; Case Report

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Necrotizing fasciitis (NF) is a rare soft tissue infection that involves the skin, subcutaneous tissue, fascia, and muscle layer and threatens life with rapid invasion and spread. Its treatment is possible with early recognition, appropriate antibiotherapy, and rapid surgical intervention. However, despite all interventions, it is a disease the management of which is sometimes difficult. In our case, it was aimed to present a case of extensive multi-drug resistant necrotizing fasciitis, which developed due to intramuscular diclofenac sodium injection done by a non-healthcare worker, which grew multi-drug resistant acinetobacter baumannii in the wound site sample, and which was treated with negative pressure wound therapy system in addition to antibiotic therapy and wide surgical debridement.

**Keywords:** Negative pressure wound therapy system, multi-drug resistant acinetobacter baumannii, necrotizing fasciitis, self-injection

## PP-0492 [General Surgery Diseases]

# Is Flap in Pilonidal Sinus Disease Needed for Each Patient?

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**Objective:** Pilonidal sinus disease is a very frequently seen disease of intergluteal sulcus and it has many treatment modalities. In our study, we planned to compare the primary repair and Limberg flap method in terms of recurrence and complications.

**Material and Methods:** The patients who were diagnosed with pilonidal sinus and performed primary excision and Limberg flap in the Department of General Surgery in Adnan Menderes University Medical Faculty between September 2014 and September 2016 were included in the study and their recurrence rates and complications were compared.

**Results:** A total of 123 patients were included in the study. While 63 (51.2%) patients underwent primary excision, 60 (48.8%) patients underwent Limberg flap. Complications occurred in 13 (21.6%) patients undergoing primary excision and in 6 (10%) patients undergoing Limberg flap. While 8 patients developed recurrence, 6 (75%) of them were in the primary excision group and 2 (25%) were in the Limberg flap group. There was a statistically significant difference with regard to recurrence and complication ( $p=0.042$ ).

**Conclusion:** In pilonidal sinus disease, flap method gives better results in terms of recurrence and complications compared to primary repair.

**Keywords:** Pilonidal sinus, limberg flap, primary repair

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## PP-0493 [General Surgery Diseases]

# Interdigital Pilonidal Sinus Treated with Crystallized Phenol

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Interdigital pilonidal sinus is a rare disease which is mostly observed in barbers as a result of prolonged exposure of interdigital space to hair, and patients reported in the literature have generally been treated by excision and primary repair, curettage and leaving to secondary recovery, or excision and skin grafts. Recurrences have been reported despite this aggressive treatment. In this report, it was aimed to present a case of interdigital pilonidal sinus that was treated with crystallized phenol method and obtained successful results in early period.

**Keywords:** Interdigital pilonidal sinus, crystallized phenol, barber disease

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## PP-0494 [General Surgery Diseases]

# A Case Performed Cytoreductive Surgery and HIPEC due to Primary Peritoneal Serous Carcinoma

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Primary peritoneal serous carcinomas are typically characterized by the presence of peritoneal tumors and normal-looking ovaries, which may be considered as peritoneal carcinomatosis or malignant mesothelioma. In this study, we presented a 72-year-old patient who was admitted due to abdominal swelling and performed cytoreductive surgery and HIPEC because the examinations revealed primary peritoneal serous carcinoma.

**Keywords:** Peritoneum, serous carcinoma, cytoreductive surgery

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## PP-0495 [General Surgery Diseases]

# Abdominal Castleman's Disease

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**Introduction:** Castleman's disease is a rare disease and it is a member of the group of lymphoproliferative diseases. It is usually detected during routine screening in asymptomatic cases. In this article, it was aimed to present a case of castelman disease presenting with an abdominal mass causing abdominal pain. Castleman's Disease or angiofollicular lymphoid hyperplasia is a rarely encountered heterogeneous lymphoproliferative disease. According to localization, there are two forms as unicentric and

multicentric. And, according to the histological characteristics, there are forms of plasma cell type, hyaline-vascular type, and mix type. Unisentric ones may be seen more frequently in the mediastinum and in the abdomen or in the retroperitoneum with enlarged lymph nodes. Multicentric ones may present with peripheral lymphadenopathy and hepatosplenomegaly accompanied by fever and weight loss.

**Case:** A 40-year-old male patient with a complaint of nonspecific abdominal pain had no significant feature in his history, physical examination or laboratory parameters. Abdominal ultrasonography revealed a mass of approximately 46 \* 52 mm, which did not show a clear relationship with the pancreas and liver in the neighborhood of the pancreatic head. Intravenous contrast-enhanced abdominal tomography showed an extrapancreatic solid mass at the level of the portal hilus, displaying contrast-enhancement and no prominent invasion findings and having calcifications causing minimal striation. Hodgking lymphoma could not be ruled out in the Tru-cut biopsy. The PET CT showed FDG uptake with SUVmax value of 3.7. In the laparotomy, a giant lymph node was detected at the level of the pancreas head and portal hilus and in the neighborhood of the vena cava, and it was totally excised. The patient was discharged on the postoperative 4th day without any complications. Pathology result was reported as Hyalin-vascular type Castelman disease. The patient is now in the second year of the follow-up and he lives with no recurrence and no symptoms.

**Discussion:** Castleman's disease is characterized by benign lymph node hyperplasia. It can clinically present with abdominally, retroperitoneally or peripherally located enlarged lymph nodes, particularly with the localization of mediastinum. Besides lymph nodes, it can involve many regions such as lung, breast, pancreas, adrenal gland, spleen, muscle, salivary glands, larynx, and parapharyngeal region. In its etiopathogenesis, the immune system disorder is generally kept responsible.

Cytokines such as interleukin-6 and VEGF, EBV and Human Herpes Virus-8, and an atypical lymphoid hyperplasia caused by an abnormal immune response to antigenic stimulation are among the agents that are considered to be responsible. In the multicentric type, nonspecific symptoms such as fever, weight loss, night sweating, diffuse lymphadenopathy and hepatosplenomegaly due to increased IL-6 level can be observed and POEMS syndrome (polyneuropathy, organomegaly, endocrinopathy, monoclonal protein, skin findings) is seen rarely. In imaging methods, it can be observed as a well-circumscribed soft tissue mass which is similar to lymphoma. Calcifications spreading radiatively from the mass center or having peripheral localization can be seen.

**Conclusion:** In our case, we radiographically applied to ultrasonography and then contrast-enhanced abdominal tomography. There are different modalities in the treatment. Localized disease can be treated and cured by surgery or radiotherapy. However, in patients with systemic disease, complete remission can only be achieved with prednisolone or chemotherapy.

**Keywords:** Castleman's disease, lymph node, abdomen

## PP-0496 [General Surgery Diseases]

# A Rare Case; Primary Splenic Angiosarcoma

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**Introduction:** Primary splenic angiosarcoma is an aggressive disease with poor prognosis. Tumor cells show CD31, CD34 and factor VIII expression. Its symptoms vary from abdominal pain to life-threatening bleeding, so patients can be diagnosed at advanced stages. The only treatment option that is currently accepted is early diagnosis and surgical treatment. In this study, it was aimed to evaluate a patient who was diagnosed with primary angiosarcoma and performed splenectomy.

**Case:** A 65-year-old male patient was admitted to the outpatient clinic with a complaint of pain in his left upper quadrant going on for 3 months. No pathological finding was observed in the laboratory values of the patient who had no history of trauma. His physical examination was usual. Abdominal ultrasound revealed no finding except a 17 mm hypoechoic lesion. The lesion was confirmed through computed tomography. In the CT, there was a splenic lesion that was isodense with spleen parenchyma in the portal phase and displayed heterogeneity in the arterial phase. The patient was performed splenectomy. In the pathological examination, it was observed that the spleen size was 14 x 9 x 5 cm and immunohistochemical examination revealed CD31, CD34, and factor VIII positivity. Ki-67 proliferation index was found to be 10-20%. The patient was evaluated as primary splenic angiosarcoma based on these findings. The patient was treated with 10 cycles of paclitaxel. The patient is still alive and under follow-up for 2 years.

**Conclusion:** Primary splenic angiosarcoma is a rare disease with an incidence of 0.1450.25/1000000. Although it is seen in middle aged group, there are studies indicating that it is seen between the ages of 14 and 89 years in the literature. As it is usually asymptomatic, it can be diagnosed in late stage. The most common symptoms include left upper quadrant pain, weight loss, fever, anemia, thrombocytopenia, and sometimes life-threatening splenic rupture. Ultrasonography, computed tomography, and magnetic resonance imaging are the auxiliary methods for diagnosis. The endothelial markers of CD31, CD34 and factor VIII play an important role in the diagnosis. Nowadays, there are studies investigating the effect of chemotherapy and radiotherapy, but the treatment method that is still accepted is splenectomy.

**Keywords:** Angiosarcoma, spleen, tumor

## PP-0498 [General Surgery Diseases]

# Which Scoring System can Predict the Severity and Mortality of Fournier's Gangrene?

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**Objective:** The aim of this study was to investigate which scoring system could simply and easily be used in predicting the severity and mortality risk of the disease of a patient who was admitted to a health center due to Fournier's gangrene.

**Material and Methods:** Demographic, clinical and laboratory data of 53 patients who were admitted to the Department of General Surgery in Ankara Numune Hospital between 2014 and 2017 with the diagnosis of Fournier's gangrene were retrospectively analyzed and obtained in electronic environment. From these data, Fournier gangrene severity index, Uludağ Fournier gangrene severity index and NUMUNE Fournier scores were calculated.

**Results:** Of the 53 patients included in the study, 37 (69%) were male and 16 (31%) were female. The median age was 57 (Min: 25- Max: 79) years. During the hospitalization, 7 (13.2%) patients developed mortality. 46 (86.8%) patients were discharged. When we evaluated the comorbidities, the majority (62%) of them had diabetes, cardiac causes, and lung problems. In the evaluation of the patients by using ROC curve, Fournier gangrene severity index, Uludağ Fournier gangrene severity index and NUMUNE Fournier scores for the determination of mortality were, 887-, 886 and 878 (95% Confidence Interval), respectively.

**Conclusion:** Fournier's gangrene is a life-threatening condition when effective surgical-medical treatment is not started. It is rarely seen in the perineal or male and female genital areas and it sometimes progresses rapidly towards the anterior and later walls of the abdomen. Aggressive debridement and appropriate medical treatment are the most important methods in its treatment. In most of series, the mortality rate is between 40.9% and 61.7%. To predict mortality rates, a number of Fournier's gangrene violence indexes and scores are available in the literature. Of them, NUMUNE Fournier score includes some parameters such as age >60, urea >40 mg/dl, RDW >14.95%, albumin <20 mg/dl, and the presence of sepsis. We think that fewer parameters of this current score than other indices and its simple and easy applicability will facilitate the rapid detection of the severity of the patients at the primary healthcare centers and refer them to further centers.

**Keywords:** Fournier's Gangrene, Fournier's Gangrene Severity Indices-Scores, mortality

## PP-0499 [General Surgery Diseases]

# Retroperitoneal Mucinous Cystadenoma as a Rare Cause of Abdominal Mass

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**Introduction:** Primary mucinous type retroperitoneal cysts are very rarely seen masses. Benign cystadenoma is a mass with low malignant potential, which includes proliferative epithelium and may display the morphology of mucinous cystadenocarcinoma. In this study, it was aimed to present a case with primary retroperitoneal mucinous cystadenoma.

**Case:** A 29-year-old female patient was admitted to the emergency department with abdominal pain going on for about a week. She had no history of comorbid disease or surgery. Her menstrual cycles were regular. She had no familial history. The physical examination revealed only tenderness in the right lower abdominal quadrant. No abnormal finding was detected in the laboratory tests. Tumor markers were normal. Because the abdominal USG revealed a 73x33 mm cystic mass lesion in the cecum localization on the right side of the abdomen, CT was planned. In the CT, an isolated retroperitoneal cystic lesion with no relationship with the intestinal segments was reported in the lateral area of the cecum. Colonoscopic examination was performed and its result was reported as normal. The patient, whose gynecological examination was also normal, was performed laparotomy. Retroperitoneal cyst and edematous appendix were resected. On the postoperative 2nd day, the patient was discharged with healing. The pathology report was reported as mucinous cystadenoma and the patient was followed in the outpatient clinics of gynecology and general surgery.

**Conclusion:** Primary retroperitoneal mucinous masses are rarely encountered lesions. Although there are a few theories about the formation of lesions, the etiology is not clear. We think that these masses should be closely followed up and treated with multidisciplinary approaches because of the malignancy potential.

**Keywords:** Isolated, cystadenoma, mucinous, retroperitoneal

## PP-0500 [General Surgery Diseases]

## Splenectomy Indications of a General Surgery Department and Post-Operative Mortality Profile

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**Objective:** It was aimed to report the indications of patients who underwent splenectomy in the general surgery department in 6 years period and the profiles of the patients who developed postoperative mortality.

**Material and Methods:** The data of the study were obtained retrospectively by reviewing records of patients over 18 years old who underwent splenectomy in Department of General Surgery of Mustafa Kemal University Faculty of Medicine from January 2012 to January 2018. The patients were divided into two groups as those who were alive (Group 1) and those who developed mortality (Group 2). Demographic data including age and gender of patients, duration of hospitalization, separation of surgical operations as emergency or elective, how they were performed, indications, histopathological evaluation results of splenectomy specimens, survey statuses of patients under follow-up until the study was completed, were investigated. Differences between the groups were analyzed. Quantitative data were displayed as mean±std. (standard deviation) and categorical variables as% (n).

**Results:** A total of 107 patients being 54.2% male and 45.8% female were included in the study. There were 94 patients in group 1 and 13 patients in group 2. The mean age of the patients in group 1 was 43.9±18.9 (min-max 18-88) and the mean age of the patients in group 2 was 48.4±23.9 (min-max 20-90). 61.7% of the patients were electively operated, and 38.3% of them were emergently operated. Mortality developed in 6% of electively operated patients and in 22% of emergently operated patients. The rate of mortality development was statistically higher in emergently operated patients compared to electively operated patients ( $p<0.05$ ). When the indication profiles of the patients were examined, the most common splenectomy indication was trauma with 32.7%, followed by 26.2% as a component of debulking surgery in ovarian cancer, and 14% with Immune Thrombocytopenic Purpura. When the postoperative complications were examined, 82.2% of the patients had no complication and 17.8% of them had complications. The most common isolated complications were isolated abdominal hemorrhage in 6.5% of the patients and isolated atelectasis and pneumonia in 5.6% of them.

**Conclusion:** The most common indication of splenectomy in the general surgery department is trauma. In nontraumatic patients, it is most commonly performed as a component of the cancer surgery. Postoperative bleeding and pulmonary complications are seen in splenectomy patients and the rate of mortality development is higher in emergently operated patients compared to electively operated patients.

**Keywords:** Indication, complication, mortality, splenectomy

## PP-0501 [General Surgery Diseases]

## Evaluation of 11 Cases of Dermatofibrosarcoma Protuberance Treated with Surgical Excision

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**Objective:** The dermatofibrosarcoma protuberance (DFSP) was first defined by Darier and Ferrand in 1924 and it was called as DFSP in 1925 by Hoffman. DFSP is a painless slow-growing and fairly rare mesenchymal tumor, often associated with skin and subcutaneous tissue. DFSP, mostly located in the body, is characterized by a normal skin color or red-brown colored, protuberantive plaque appearance. It is usually low graded, slow-growing and rarely metastatic and is considered to be locally aggressive because of its high local recurrence rate. In this study, we aimed to evaluate eleven patients who underwent extensive excision with DFSP diagnosis in terms of adequate surgical margin and local recurrence in the light of the literature.

**Material and Methods:** The patients who were operated with the diagnosis of dermatofibrosarcoma protuberance in Ankara University Faculty of Medicine Surgical Oncology Department between 2008 and 2016, were included. All of the lesions were excised with a 3 cm clean surgical margin and an intact subcutaneous tissue containing fascia in the posterior. Patients were evaluated in terms of age, gender, localization, lesion size, postoperative follow-up period and recurrence.

**Results:** A total of 11 patients were included in the study, 7 of whom were male and 4 were female. When the age distribution of the patients was examined, the median value was found to be 36.6 with the youngest (23) and the oldest was 50. When the localizations were examined, dermatofibrosarcoma protuberance was detected in proximal of lower extremity (27.3%) in 3 patients, in body in 6 patients (54.5%), in neck in 1 patient (9.1%) and in upper extremity region in one patient (9.1%). All of the patients were alive and the mean follow-up period was 52.6 months, ranging from 1 month to 136 months. Three patients were operated in the external center and were directed to our clinic due to the continuity of the surgical margin. Eight patients were operated by establishing their first diagnoses. Two patients were diagnosed after punch bx and 9 patients were diagnosed after excision bx. For all patients the excision was performed in such a way that a minimum of 3 cm clean surgical margin was provided and the surgical defect site of 6 patients was closed primarily and the surgical defect site of 5 patients was closed with Split-thickness skin graft. Skin grafts taken from the thigh region of 0.3-0.45 mm in thickness as split-thickness skin graft. Sufficient surgical margins were provided in all the patients no chemotherapy or radiotherapy was needed in any of the patients. During the follow-up, local recurrence developed in 1 patient after 13 months and the patient was reoperated. Patients were admitted to the follow-up protocol with once a month in the first 3 months, then once in 6 months for 2 years and then with annual physical examination and CT imaging once a year.

**Conclusion:** DFSP is a local aggressive mesenchymal tumor with painless, slow growing plaques and nodules originating from the dermis and subcutaneous tissue. The gold standard is wide excision with the condition of obtaining a clean surgical margin. Imatinib as a protein kinase inhibitor, is used in the patients displaying surgical margin continuity, having unresectable tumors or in metastatic patients and sunatinib and sorafenib are used in imatinib resistant cases.

**Keywords:** Dermatofibrosarcoma protuberans, local excision, tyrosine kinase inhibitor

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## PP-0502 [General Surgery Diseases]

# A Rare Case in Differential Diagnosis of Acute Appendicitis: Primary Epiploic Appendagitis

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**Introduction:** The torsion of epiploic appendix, ischemia or inflammation due to spontaneous venous thrombosis is known as primary appendagitis epiploica (PAE). If it is localized in the left lower quadrant it imitates diverticulitis and imitates appendicitis if it is on the right. In this case, we wanted to remind that PAE is also considered in differential diagnosis of acute appendicitis.

**Case:** A 64-year-old female patient presented with fever and severe abdominal pain in the emergency service. There was tenderness and rebound in the right lower part of the abdomen in the physical examination. In the analyses, white blood cell count was 11400/mm<sup>3</sup>, hemogram was 11.7 g/dl, and CRP was 0.26 mg/dl. There was no pathologic finding in the tomography of the abdomen. But the patient's physical examination did not change for eight hours. Diagnostic laparoscopy was performed; edematous appendix and epiploic infarct was observed in the cecum at the same time. Laparoscopic appendectomy and epiploic excision were performed. The pathology report was obtained in consistent with acute appendicitis and fat necrosis. Post-operative broad-spectrum antibiotics were given to the patient. The patient was discharged without any complaints, and with normal examinations five days later. Epiploic appendages are lobulated or elongated subserosal fat pads on the colon wall. Although greater number of them are observed in the sigmoid colon and ileocecal region, approximately 50-100 of them are found in the entire colon. Torsion and infarction can often be seen in these structures fed from the colic artery branches due to poor blood flow and pedicular structures that allow them to move freely. The involvement of the sigmoid colon and epiploic appendages of cecum is probably more common because of the greater size and elongation. PAE is most commonly seen in the second, fifth, decades and men. Pain varies frequently depending on the location of the inflammatory event and is often in the left and right lower quadrant. The pain starts suddenly; localized, blunt and may be colic and there is no migration in pain. Nausea and vomiting may occur. Fever rarely exceeds 38 °C. In most patients the leukocyte count is normal or slightly elevated. There may be a slight increase in CRP because ischemic fat necrosis may trigger an inflammatory response. Blood ultrasonography can also be used for diagnosis, but CT is highly specific. Appendicitis, diverticulitis, acute cholecystitis and acute gynecologic diseases are in the differential diagnosis of PAE. Symptoms last for shorter than a week in PAE. Oral antibiotics and anti-inflammatory drugs are used in the treatment. Rarely, complications such as bowel obstruction, adhesion, abscesses, and peritonitis develop and surgical intervention is required.

**Conclusion:** PAE is a disease that should be kept in mind in patients with localized abdominal pain in the left or right lower quadrant, and in acute abdomen cases in whom physical examination and laboratory findings are suspicious, Radiological methods, particularly CT, should be used in the diagnosis especially in the case of suspected patients. Differential diagnosis in these cases is important for preventing unnecessary antibiotherapy, hospitalization and surgical interventions.

**Keywords:** Epiploic appendagitis, appendicitis, infarct

## PP-0503 [General Surgery Diseases]

## Nonoperative Approach to the Penetrating Abdominal Gunshot Injuries

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**Introduction:** Today, developed intensive care conditions in addition to being able to obtain detailed information about the location and severity of the injury by the improvements in imaging methods increase the applicability of nonoperative treatment. Although nonoperative treatment is considered as standard practice in blunt abdominal injuries in recent years, this approach is limited to selected cases in gunshot injuries (GSI). We aimed to present a penetrating GSI case in whom we performed non-operative treatment.

**Case:** A thirty-year-old male patient was admitted to the emergency department due to GSI which had happened 30 minutes ago. His vital signs were normal in physical examination. There was a wound site on the anterior wall of the abdomen that was thought to relate to a foreign body entrance hole about 5 mm under the xyphoid. There was sensitivity in the epigastric region. There was no defense or rebound. CT of the patient revealed metallic opacity (bullet) about 1.5 cm in diameter in the left lateral lobe of the liver causing artifact, laceration line continuing through the bullet trace and free fluid of the hemoperitoneum in the vicinity. Nonoperative treatment of the patient was decided because the general condition of the patient was good and no pathology necessitating emergency operation was detected in the imaging methods. The patient underwent close physical examination, monitorization in intensive care conditions, and follow-up under control US and CT. He was discharged on the 5th day of his follow-up. No problem was encountered after discharge.

**Conclusion:** Non-operative treatment in the patients having penetrating abdominal GSI is quite rare and is a treatment option in selected cases. We think that the patients has to be stable hemodynamically and they should not have peritonitis findings in order to apply nonoperative treatment and it should be applied in cases selected carefully at centers where they can be followed closely with continuous monitoring and physical examination.

**Keywords:** Gunfire, Injury, non-operative

## PP-0505 [General Surgery Diseases]

## Our Extremity Protective Surgery Experience After Hyperthermic Perfusion in Extremity Liposarcoma

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The purpose of treatment of limb liposarcoma is the negative surgical margin. This has been historically provided by amputation. This treatment approach, which causes severe loss of function and psychological effects, is replaced by extremity protective surgical approaches. In addition to preoperative and postoperative radiotherapy and chemotherapy treatment approaches, extremity hyperthermal perfusion has begun to be applied and its efficacy is still being investigated. The male patient at the age of 55, who complained of swelling of the left leg for the last 3 years has refused treatment on his own request. The patient was admitted due to increased pain on the left leg, weakness, loss of sensation, lower leg and ulcerated necrotic lesion. The patient was scheduled for a two-stage treatment. First, hyperthermic perfusion was performed. Catheter was inserted into the left external iliac artery and vein and 80mg of melphalan was applied for 1 hour. One month after perfusion, there was a decrease in mass size and in compression symptoms. Then mass excision was performed by surgery. The patient who did not develop complication was discharged on the 5th postoperative day. We aimed to present a case that we treated with extremity-protecting surgery by adding hyperthermic perfusion in extremity liposarcoma for which amputation is suggested.

**Keywords:** Hyperthermic perfusion, extremity, liposarcoma

## PP-0506 [General Surgery Diseases]

## Preoperative Comparative Analysis of Plonidal Sinus Patients with and without Hypertrichosis

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**Objective:** Pilonidal sinus is an infective disease frequently seen in natal cleft and sacrococcygeal region. The cause is often keratin plugs, presence of dermatopathy and hair remnants in natal cleft and hair-related foreign body reactions. Hypertrichosis, regardless of the androgen effect, is defined as the growth of vellus hairs in areas not particularly related to the secondary sex character. We aimed to evaluate the preoperative clinical presentation of the patients with and without hypertrichosis and some hormonal parameters that may be related with hypertrichosis of patients.

**Material and Methods:** The records of 294 patients operated due to primary or recurrent pilonidal sinus between May 2014 and May 2017 were retrospectively reviewed. Patients were classified as those with and without hypertrichosis. Ferriman-Gallwey scoring system was used for hypertrichosis. Demographic and body mass indexes, preoperative examination findings, family histories, presence of infection or abscess, testosterone levels in male patients, testosterone and progesterone levels in women were recorded.

**Results:** Of the patients included in the study, 239 patients were male and 55 were female. The mean age of the patients with hypertrichosis was  $24.4 \pm 7.0$  and it was  $23.5 \pm 5.9$  of the patients without hypertrichosis. Female gender, family history of pilonidal sinus in first degree relatives, family hypertrichosis rate were significantly higher in the hypertrichosis group than the group without hypertrichosis ( $p=0.030$   $p=0.035$   $p<0.001$ ). There was a statistically significant difference in favor of hypertrichosis group in preoperative infection or abscess admission history of the groups ( $p=0.046$ ). The female progesterone mean of the group with hypertrichosis was significantly lower than the hypertrichosis group ( $p=0.003$ ).

**Conclusion:** Hypertrichosis, a risk factor for pilonidal sinus, may complicate the preoperative process by increasing the risk of infection and increases the risk of pilonidal sinus, especially in the female patient group.

**Keywords:** Pilonidal sinus, hypertrichosis, hormone

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## PP-0507 [General Surgery Diseases]

# Evaluation of 20 Cases Undergoing Urinary Diversion or Primary Ureteroplasty Due to Urinary System Involvement During Pelvic Exenteration and Cytoreductive Surgery

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**Objective:** Ureter is a tubular structure transmitting urine from pelvis renalis to bladder by peristaltic movements and gravitational assistance, furnished with transitional epithelium, formed of mucosa musculus layer and serosa from the inside out. It is about 3-5mm in diameter and 25-30 cm in size. Primary tumors of ureter are very rare and usually develop secondary to collecting system (renalpelvis) and bladder trigon located tumors. Due to the retroperitoneal course of the ureter, urinary complications may be encountered in association with retroperitoneal sarcoma, lymphoma, or colon cancer reaching big sizes and displaying invasion to the retroperitoneum. In this study, we aimed to present our case with the literature in terms of surgical technique applied in urinary diversions after resection, negative surgical margin, local recurrence and other complications in patients necessitating urethral resection during cytoreductive surgery and pelvic exenteration.

**Material and Methods:** This study included 20 patients who underwent primary ureteral reanastomosis or urinary diversion at Ankara University Faculty of Medicine Department of Surgical Oncology between 2015 and 2017. Ureter in all patients was dissected and resection was performed to obtain clean surgical margins. Patients were evaluated according to age, gender, anastomosis applied and diversion technique, primary tissue diagnosis, postoperative follow-up and recurrence.

**Results:** A total of 20 cases were included in the study, 12 of whom were male and 8 were female. The age distribution of the patients was between 37-87 years with a mean of 57.5 years. When the primary diagnoses of the patients were examined, 6 cases were over cancer, 2 cases were retroperitoneal sarcoma, 11 cases were colorectal cancer and one case was detected as primary ureter cancer. All of the patients underwent laparotomy at the external centers and they were directed to our clinic with the aim of cytoreductive surgery and pelvic exenteration. 6 cases were underwent end-to-end ureteroerostomy with partial ureteral resection. Ureterosigmoidostomy was performed in 3 cases who underwent pelvic exenteration. Ureterosigmoidostomy was performed in 3 patients who underwent L.A.R + partial seistectomy, end-to-side transureteroureterostomy was performed in 3 patients, right ureteral partial resection and boari flap application with ureterovesical anastomosis (ureteroneocystostomy) were performed in 4 cases. Bilateral ureterocutaneostomy was performed in one patient. Ureteral Double-J catheter was placed in all the cases who underwent ureteroureterostomy. The ureter tissue was sutured with single-layered 3/0 vicryl. Ureterosigmoidostomy and ureterovesical anastomoses were placed in the ureteral double-J catheter, and then the mucosa and serosa were separately reconstructed with 3/0 vicryl. Bricker anastomosis was performed in patients who underwent ureterosigmoidostomy. The



follow-up period of the patients ranged from 6 months to 2.5 years and the mean duration was 14.5 months. Local recurrence findings were observed in two cases. Bilateral percutaneous nephrostomy catheters were attached to 2 cases with recurrence. No early or late complications related to urinary diversion have been observed and regular follow-up is ongoing.

**Conclusion:** Urinary passage is provided by ureteroureterostomy, ureteroneocystostomy, psoas hitch and boari flap in cases where ureter resection is needed. Urinary diversion techniques are used in cases necessitating many resections that primary anastomosis can not be performed and undergoing cystectomy due to diffuse involvement. Urinary diversions are examined in two groups, non-continent (ureterotomostomy, ureterosigmoidostomy, Loop diversions-conduit) and continent (continent cutaneous diversion and orthotopic neobladder). For an ideal diversion, a reservoir (conduit) to collect urine at low pressure, a tubular structure to provide urinary drainage at a sufficient level and a sufficient mechanism to provide continence in terms of quality of life are necessary.

**Keywords:** Boari flap, cytoreductive surgery, uriner diversion

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## PP-0508 [General Surgery Diseases]

# Our Rates of Endometriosis in Our Hospital Between 2015 and 2017

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**Introduction:** Localized endometriosis is very rare in the rectus abdominalis muscle. Endometrioma should be considered in the differential diagnosis of masses in the anterior abdominal wall of reproductive age women, especially if there is a history of surgical intervention and the pain increases with the menstrual cycle. These masses are often confused with the incisional hernia, and patients usually refer to general surgeons. Abdominal wall endometriosis (AWE) is the placement of endometriosis on the abdominal wall after obstetric or gynecological operations in which hysterotomy is performed. Only 1% of all endometriosis cases are located in the abdominal wall and they can be confused with abscess, lipoma, hematoma, incisional hernia, desmoid tumor, sarcoma, lymphoma or primary and metastatic cancers that can cause mass in abdominal wall and cannot be diagnosed preoperatively. Our aim in our presentation is to consider extra pelvic endometriosis when we detect a mass in the anterior abdominal wall and contribute to raise awareness about this lesion in reproductive age women who have complaints of inguinal pain and dysmenorrhea.

**Case:** Nine patients with a mean age of 27 were admitted to our hospital with complaints of abdominal pain between 2015 and 2017. The common feature of all of the patients was a palpable mass that was enlarged during the menstruation period and the pain was exacerbated. Mass lesions were detected in the described region of subcutaneous Pfannenstiel incision line and in the right rectus abdominis muscle in the superficial USG performed. An excisional biopsy was planned for diagnosis. Pathological examination of the material revealed endometriosis in the rectus abdominis. Endometriosis is a common chronic gynecological disease which can cause negative results in terms of social and sexual life and reproduction such as dysmenorrhea, dyspareunia, pelvic pain and infertility. The most common reason for admission is dysmenorrhea. The cause of the pain is contractions that occur in the uterus due to the effects of prostaglandin secreted in the foci of endometriosis. Ectopic endometrium responds to cyclical hormonal changes and bleeds into the surrounding stroma, leading to pressure and pain. As a result of recurrent bleeding episodes fibrosis and scar tissue occur. Surgical treatment cures more than 95% of cases. It is especially emphasized that it is necessary to remove a part of the abdominal fascia frequently to provide complete excision.

**Conclusion:** Endometriosis should be considered in the differential diagnosis of the palpable mass in the anterior abdominal wall of women who have had abdominal or pelvic surgery particularly cesarean. The definitive diagnosis is made by histological examination of the lesion. Complete surgical excision is sufficient in its treatment. Increased awareness of general surgeons about this disease is useful in guiding preoperative evaluation and treatment.

**Keywords:** Abdominal pain, endometriosis, rectus abdominis

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## PP-0509 [General Surgery Diseases]

# Mass in the Spleen: Hydatid Cyst? Pseudocyst?

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**Introduction:** The presence of a mass in the spleen is a condition we often encounter in daily practice. The majority of these masses are incidentally detected and are usually assessed for hydatid disease or metastasis. Spleen pseudocysts are much less common and the incidence is reported as 0.07%. This condition, which usually develops secondary to trauma, can be confused with hydatid cyst. In this study, surgical results of a patient who was diagnosed with hydatid cyst and underwent medical and surgical treatment were discussed.

**Case:** A 40-year-old female patient consulted to our clinic due to the left upper quadrant pain for 5 months. Immobile mass was palpated in the left upper quadrant in the physical examination of the patient who stated that he had taken Albendazole treatment for 3 months due to hydatid cyst in the external center. There was no other feature in his history. The results of ultrasonography, abdominal computed tomography (CT) and abdominal computed tomography (CT) were reported as an appearance consistent with Type 3-4 semisolid hydatid cyst including echogenic regions, applying compression to the stomach from the posterior with a size of 118x125x100 mm in superomedial neighborhood of spleen. IHA and ELISA tests were negative. Laparotomy was planned because of compression symptoms. A solid mass of approximately 15 cm partially invasive to diaphragm on the left, stomach posterior in the front, and distal pancreas in the posterior, originating from posterior of spleen was detected. Splenectomy was performed. Histopathological examination was reported as spleen pseudocyst. No complications were encountered in the postoperative period and the patient was discharged. The patient was asymptomatic at the 1st year follow-up.

**Conclusion:** Spleen pseudocysts are often asymptomatic but incidentally detected in routine examinations and controls. It is often diagnosed and treated as hydatid cyst and primary spleen tumor, as it is seen more commonly and because of its radiological appearance. Although markers such as IHA and ELISA are sensitive for hydatid cysts, their being negative leads to the exclusion of the disease. However, the scolex-like appearances in the mass do not help differential diagnosis. Despite the evaluations in different sequences of the differential diagnosis with MRI, especially type 3-4 cysts can be confused with hydatid and the follow-up decision can be made and unnecessary antiparasitic therapy can be applied. Although the questioning of trauma history of the patient is the best differential diagnosis we have in hand, it can be detected idiopathically as in our case. The risks such as size of the cyst, the compression on the surrounding organs, bleeding into the cyst, and pseudoaneurysm are the main options of surgery. Total splenectomy with partial splenectomy is preferred due to remaining of remnant cyst and recurrent splenic pseudocyst formation. Since the approach to the spleen masses can change our diagnosis and treatment plan, spleen pseudocysts should be kept in mind in the differential diagnosis.

**Keywords:** Spleen mass, hydatid cyst, pseudocyst

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## PP-0510 [General Surgery Diseases]

# Intraperitoneal Large Mobile Mass Due to Spontaneous Appendix Epiploica Torsion; Case Presentation

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**Introduction:** We aimed to present a case of intraperitoneal mass due to spontaneous appendiceal epiploica torsion which is very rare in surgical practice.

**Case:** Appendiceal mucocele was primarily considered upon observing a lesion having a size of 68x55 mm with regular margins and calcification in the center in the appendix localization of the contrast-enhanced abdomen CT. Laparotomy was planned because the neoplastic findings could not be excluded in the radiological findings of the patient whose laboratory tests were normal. In the exploration, a giant nodule was found in the right lower quadrant which was free without invasion to the surrounding tissue and was excised and no additional pathology was observed. The removed free mass was 7x6.5 cm in size, having a shape of an egg, 180 grams in weight and hard with white-yellow color and slippery surface. As a result of histopathologic examination, it was reported as giant sclero calcified hard nodule having a lamellar appearance the middle of which was slightly calcified with regular margins. The patient was discharged without any problems on the second postoperative day without complication.

**Conclusion:** Although there are limited cases about intraperitoneal free masses in the literature, the exact pathogenesis is not clearly defined. Appendicitis is thought to be caused by epiploca, then omentum, adnexal autoamputation and pancreatic fatty tissue. The formation of the intraperitoneal free mass is thought to be caused by the reduction of blood flow as a result of torsion of the appendix epiploicus in the chronic process and consequently by necrosis, saponification in time, calcification and finally separation of the pedicle from the colon because of weakening of pedicle. In addition, if the masses increase in size, symptomatic progression can lead to clinical problems such as intestinal obstruction, urinary retention. Several authors have reported the increase of free masses by peritoneal fluid with protein absorption Leiomyoma, rhabdomyomas, teratomas, fibroma as benign masses and colorectal cancer, ovarian cancer and metastases should be considered as malignant masses in the differential diagnosis of such masses. In addition, it can be attributed to the effects or complications of other diseases such as urinary stones, gallstones and appendix stones and tubercular granuloma. Lymph nodes due to systemic diseases, lymphomas and calcifications

of foreign bodies should be tried to be excluded. Although the primary pelvic/tubal hydatid cyst located in the intraabdominal region is very rare in endemic areas such as our country, it should be kept in mind in the preoperative diagnosis in endemic areas like our country. As a result, small, mobile nodules associated with liquefaction necrosis due to different causes can be seen in intraperitoneal exploration of patients who are operated intraabdominally due to different causes. Because of their growth, it can be associated with different diseases as in our case and because the neoplasms cannot be excluded, peritoneal exploration decision can be made. In this case, we aimed to remind these masses, which are very rare in surgical practice. Although these masses are rare, it should be kept in mind that they can reach large dimensions as in this case.

**Keywords:** Intraperitoneal mass, appendiceal epiploica, spontaneous torsion

## PP-0511 [General Surgery Diseases]

# Comparison of Open and Laparoscopic Splenectomy in Elective Cases: Çukurova University Experience

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**Objective:** Elective splenectomies are performed with various indications, especially benign hematologic diseases. Hemolytic anemias and idiopathic thrombocytopenic purpura are among these. With technological improvements and increased surgical experience, surgeons have begun to perform most open surgical procedures laparoscopically. Today, laparoscopic splenectomy (LS) has become an alternative to open splenectomy (OS) in benign hematologic diseases, except for patients who have very large spleen. Many studies have shown that it is the gold standard for the treatment of benign hematologic diseases. We aimed to compare laparoscopic splenectomy and open splenectomy with our own findings and to evaluate the results in the light of literature.

**Material and Methods:** The study included 95 patients who underwent elective splenectomy for various diseases in the Department of General Surgery at Çukurova University Faculty of Medicine between 2013 and 2018. Twenty of the patients underwent laparoscopic surgery and 75th of them underwent conventional surgery. Patients were evaluated retrospectively using an electronic database. In addition to demographic information of the patients, preoperative blood counts, etiologic cause, duration of operation, amount of blood loss, splenic size and weight, necessity to switch from laparoscopic surgery to open surgery, duration of hospitalization and postoperative developing complications were investigated.

**Results:** A total of 95 patients undergoing 75 open, (79%) and 20 laparoscopic (21%) splenectomy were included in our study. The mean age of the patients who underwent open splenectomy (OS) was 43,3 (18-78) and it was 39,2 (19-61) in the patients who underwent laparoscopic splenectomy (LS). Six of the cases who underwent LS were male (30%) and 14 were female (70%). Thirty two of the cases who underwent OS were male (42.6%) and 43 (57.4%) of them were female. The indications for splenectomy were 12 ITP, 4 hemolytic anemia, thalassemia, 4 cysts, tumor in LS and 16 ITP, 23 hemolytic anemia, thalassemia, 17 cysts, tumor, 19 hypersplenism in OS. Duration of operation and bleeding in LS patients were (105min, 125 ml), and they were (80 min, 175 ml) in OS patients, mean spleen size and weight in LS patients were (13cm/225 g) and they were (17 cm, 245 g) in OS patients, switch from laparoscopy to open surgery took place in 5 patients, postoperative hospitalization period in LS patients was 3,7 days and 4.8 days in AS patients. Subcutaneous infection developed in 4 patients, atelectasis developed in 6 patients in atelectasis 2 patients and chylous fistula developed in 2 patients in AS patients and atelectasis developed in 3 patients among OS patients.

**Conclusion:** The development of laparoscopic surgical equipment has made it possible for splenectomies to be performed with minimally invasive surgical procedures and complication rates comparable to open surgery. In many studies, the advantages of LS over OS have been pointed out. These advantages were patients' needing less analgesic after surgery, they can move faster, and get back to work earlier, and less postoperative complications such as atelectasis and ileus. The most common disadvantage of LS in the literature is prolonged operation time. LS is a strong alternative to OS in the surgical treatment of hematologic diseases with decreasing operation time and switching to open surgery after increased experience and the use of more functional devices and less hospital stay and less postoperative complication rates. In our study, hospitalization duration, bleeding volume and spleen dimension and weight was found higher in OS and the duration of operation was found longer in LS.

**Keywords:** Laparoscopic splenectomy, ITP, splenectomy

## PP-0512 [General Surgery Diseases]

# Lower Extremity Localized Extraskelatal Ewing Sarcoma: A Case Report

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**Introduction:** Ewing sarcoma is a rare tumor of childhood and adolescence. It is the second most common disease among childhood bone tumors. This group of tumors includes classical Ewing tumor, Atypical Ewing tumor, chest Askin tumor and primitive neuroectodermal tumors. The Ewing sarcoma tumor family shows morphological similarities and even experienced pathologists may have difficulties in diagnosis. We report here a case of a patient who was diagnosed as Ewing sarcoma in the heel of foot.

**Case:** It was learned from the anamnesis of a 21-year-old male patient that he was admitted to the dermatology department due to a painful, bleeding, and enlarging mass on his right heel for 2 months. Pathologic examination of the incisional biopsy revealed a small round cell tumor. Molecular pathologic examination revealed that Ewing sarcoma was diagnosed due to ESWR 1 positive. An exophytic, ulcerated, hemorrhagic mass of about 8x10 cm was detected on the heel of the right lower extremity in the physical examination. Magnetic resonance imaging examination revealed no local invasion and PET/CT scan showed no distant metastases. The patient underwent extensive local excision and simultaneous split thickness skin grafting with extraskel-etal Ewing sarcoma diagnosis. Postoperative pathologic examination result was reported as Ewing sarcoma pT2 Nx Mx with histologic grade 2 and differentiation score 3 and nearest surgical margin was far from 1 cm and negative according to standard reporting system (Modified Rubin). Radiotherapy was started with the recommendation of the tumor council to the patient postoperatively. The patient was under follow-up in the 2nd postoperative month.

**Conclusion:** Extraskel-etal Ewing sarcoma is a rarely diagnosed tumor that is difficult to diagnose and therefore delayed in treatment. Chemotherapy, radiotherapy and surgery options with different priorities are available for treatment.

**Keywords:** Extraskel-etal Ewing's sarcoma, ESWR1, modified rubin

## PP-0513 [General Surgery Diseases]

# Comparison of Our Results: of Marsupialization, Primary Closure and Flap Application in Primary Pilonidal Sinus Surgery

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**Objective:** The most important problem of sacrococcygeal pilonidal sinus disease is recurrence. Each surgeon applies a treatment according to his experience. There is no standard surgical treatment. Marsupialization, primary closure and flap were the preferred methods in the Department of General Surgery of our hospital. The retrospective examination results of these applications were examined.

**Material and Methods:** 249 patients who were operated due to pilonidal sinus between 2010 and 2016 were examined retrospectively. Patient hospitalization file information and outpatient clinic admissions were examined and the patient results were compared in terms of demographic data, duration of illness, body mass index, surgical technique and duration, hospitalization, complications, dependency on dressing, postoperative follow-up, pathology specimen and recurrence. Findings With the reason of sacrococcygeal pilonidal sinus, 249 patients were excluded from the study due to the fact that 12 patients were relapsed.

**Results:** Of 249 patients with of sacrococcygeal pilonidal sinus, 12 were excluded from the study due to the occurrence of recurrence. Patients were divided into three groups as undergoing Marsupialization, Primary Closure and Flap. There was no difference in terms of gender, age, and body mass index. However, the duration of disease ( $p=0.032$ ), duration of operation ( $p=0.000$ ), and hospitalization ( $p=0.000$ ) were significantly shorter and complication rate ( $p=0.010$ ) was significantly lower in the group treated with marsupialization. However, the dependence on the dressing was significantly longer in patients undergoing marsupialization, with marsupialization  $34\pm 13,80$ , primary closure  $10,69\pm 8,27$  and flap  $7,19\pm 8,40$  ( $p=0,000$ ). The mean postoperative follow-up period was  $1482,13\pm 399,94$  in the marsupialization group,  $1055,07\pm 385,82$  in the primary closure group and  $797\pm 296,54$  in the flap group ( $p=0,000$ ) and there was a significant difference. When the recurrence results were compared, 3% recurrence in the marsupialization group, 3% recurrence in the primary closure group and 2% recurrence in flap group ( $p=0,855$ ) did not show a statistically significant difference. When the primary closure and flap groups were compared with each other, the presence of the smooth gluteal region was significantly higher in the primary closure group ( $p=0,040$ ). The distance of the lower margin of the removed tissue to anus did not differ significantly between the two groups ( $p=0,155$ ). The volume of tissue removed in the flap group was significantly higher than the primary closure group ( $p=0,000$ ). No statistically significant difference was found between the two groups in terms of recurrence ( $p=0,649$ ).

**Conclusion:** The lack of significant differences in recurrence in all three patient groups can be attributed to the uneven distribution of patients between groups, the difference in follow-up times, and inadequate randomization. However, despite the high complication rates of primary and flap methods, it is thought that the long time spent dependent on dressing affects the life quality of the patient negatively. Prospective randomized controlled trials in which postoperative quality of life scales are evaluated and 3 methods are evaluated together should be performed to reveal recurrence of the disease and quality of life.

**Keywords:** Flap, marsupialization, pilonidal sinus, primary closure

## PP-0514 [General Surgery Diseases]

# The Importance of Erythrocyte Distribution Volume and CRP/Albumin Values in Prediction of Prognosis of Acute Pancreatitis

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**Objective:** Acute pancreatitis is one of the most important pathologies of gastrointestinal pathologies and our aim in this study is to determine the prognosis relationship of erythrocyte distribution volume (RDW) and CRP/albumin.

**Material and Methods:** The study was retrospective and acute pancreatitis cases were taken and divided into two groups as moderate and severe group according to Ranson score. RDW, CRP/albumin and hospitalization, intensive care unit hospital stay, and complications between these two groups were compared.

**Results:** A total of 264 patients were included in the study. While moderate pancreatitis was found in 204 patients (77.2%), severe pancreatitis was found in 60 patients (22.8%). ( $P=0.081$ ). There was no statistically significant difference in RDW values between these two groups ( $p=0.193$ ). When CRP/Albumin values were examined, it was found that values in the severe AP group were significantly higher than the other groups ( $p<0.001$ ) When the total hospitalization duration and total hospital stay in intensive care were examined, it was observed that the patients in the severe AP group stayed longer in the hospital than the other group ( $p=0.001$ ,  $p=0.047$ )

**Conclusion:** Although the RDW in the acute pancreatitis picture is clearly not a specific marker for predicting prognosis, CRP/albumin is a cheap and reliable marker that is easy to administer.

**Keywords:** Acute pancreatitis, erythrocyte distribution volume, CRP/albumin, prognosis

## PP-0515 [General Surgery Diseases]

# Intraabdominal Benign Cystic Mesothelioma

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**Introduction:** Cystic mesothelioma is a rare disease. Although it is usually pleural originated, it can also develop from peritoneal surface. It is more common in women than men. Intraabdominal lesions present symptoms with bloating and pain complaints. Diagnosis is difficult with imaging methods. The treatment is surgery. In this report, we present a case being admitted with abdominal pain and bloating in whom cystic lesion in the abdomen was detected and a final pathology of benign cystic mesothelioma was obtained.

**Case:** A thirty-year-old female patient presented with complaints of abdominal pain and distention. She had a history of operation 3 times due to intra-abdominal cystic mass. The pelvic MRI revealed a cystic, lobulated mass with a 12x11x16 cm in size in the right quadrant of the pelvic region filling Douglas and extending to the adnexal lodge, including fine septa and having contrast involvement in its septas after giving intravenous contrast material. The operation was decided due to recurrent mesothelioma. In the exploration, a large number of cystic lesions having the largest diameter of which was approximately 15 cm were detected, with a large sigmoid colon, probably of gynecologic origin, filling the pelvis almost completely and intermediate plains with sigmoid colon were unclear. The cysts were separated from the organs. The cyst contents were sampled for histopathological examination. The pericyst layers were excised. All cystic structures were removed from the intraabdominal area and the operation was terminated. She was discharged on the postoperative course without any problems. Pathology result was obtained as benign cystic mesothelioma.

**Conclusion:** Benign cystic mesothelioma originating from peritoneal is rare. The etiology is not fully elucidated. It may present symptoms with abdominal bloating, palpable mass and pain. The diagnosis is made histopathologically. The treatment is surgery. Non-surgical therapies such as hormone therapy can be performed in recurrent cases. But their efficacies are limited. In this case, relaparotomy was decided due to the frequency and severity of the symptoms. In conclusion, benign cystic mesothelioma should be kept in mind in the differential diagnosis in cases with cystic mass in the abdomen.

**Keywords:** Abdomen, cyst, mesothelioma

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## PP-0516 [General Surgery Diseases]

# Aggressive Angiomyxoma: A Rare Perineal Mass

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**Introduction:** Aggressive angiomyxoma is rare and benign mesenchymal tumor, usually seen in women of reproductive age. Despite having benign nature, it is considered as aggressive due to its invasion capacity and recurrence tendency. Perineal abscess in imaging can be confused with vaginal cyst and bartolin cyst. In this study, we aimed to present a case presenting with perineal mass and having a rare case of histopathology.

**Case:** A 36-year-old female patient complaining of bloating and pain in her right hip for two years was admitted to the out-patient clinic. The patient who had a caesarean section a year ago stated that her complaints started in pregnancy. In physical examination, a massive lesion was palpated in the right gluteal area at a distance of 8cm to the anus at the direction of 9 o'clock, and it was soft, well-defined and with a mild swelling with fluctuation. Laboratory values were normal. In the ultrasonography, the collection of a dense content of 73 x 48 x 68 mm in size, including point like echogenities which is considered to be related with air was evaluated as consistent with abscess. In Magnetic Resonance Imaging a lesion which was isointense in T1A and hyperintense in T2A, starting with vaginal distal part neighborhood on the right side, extending to the posteroinferior and right neighborhood of intergluteal cleft was observed. The lesion dimensions were 35x25 mm in axial plane and coronal length was 62 mm. There was no restriction on diffusion-weighted images in the lesion. A-V malformation and angiomixoma were considered as differential diagnosis. The lesion was excised as a result of the examinations. Microscopic examination revealed tumor cell-poor, pale cytoplasm, myxoid stroma dominated formed of star-shaped fibroblasts and the most typical feature of small-medium thick-walled veins were seen. Immunohistochemical examination revealed desmin, CD (cluster of differentiation) 31, CD34, ER (estrogen receptor) and PR (progesterone receptor) positivity. SMA (smooth muscle actin) was focally positive, S-100 was negative and Ki67 staining was less than 1%. This information was used to diagnose aggressive angiomyxomas. Re-excision was performed in several foci since the lesion was adjacent to the surgical margin. The patient did not receive any additional treatment and had no evidence of relapse in the third postoperative month.

**Conclusion:** The aggressive angiomyxoma has a high potential for invasion and recurrence, and the primary treatment is surgery with negative margin.

**Keywords:** Aggressive, angiomyxoma, perineal

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## PP-0517 [General Surgery Diseases]

# Comparison of V-Y Flap Application and Limberg Flap Application in Pilonidal Sinus Patients

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**Objective:** Although there are many methods defined in the surgical treatment of pilonidal sinus disease, recurrence rates are still high and the search for ideal treatment is still continuing. In this study, we prospectively followed 100 cases who underwent V-Y flap and Limberg flap techniques and reviewed the results in light of the literature. Our aim is to compare these methods in terms of patient satisfaction, complications, hospitalization durations, recovery period, getting back to work periods and recurrence rates.

**Material and Methods:** A total of 100 patients who were operated in Ankara Atatürk Training and Research Hospital with the diagnosis of pilonidal sinus between February 2012 and February 2016 were included in the study. The patients were divided ran-

domly into two groups and V-Y flap was applied to 50 patients Limberg flap was applied to 50 patients. The cases were compared statistically in terms of complications developed, recovery times, labor losses, patient satisfaction and recurrence rates of 2 years.

**Results:** The demographic characteristics, complaints and clinical findings of both groups were similar. Although the rates of postoperative wound infection were close (26%, 28%;  $p > 0.005$ ), wound dehiscence rates were higher in the Limberg group (26%, 36%;  $p < 0.005$ ). The wound healing process and labor force losses were longer in the Limberg flap group but the results were not statistically significant ( $p > 0.005$ ). There were no significant differences between the groups in terms of patient satisfaction and recurrence in the 2-year follow-up period ( $p < 0.005$ ).

**Discussion:** Pilonidal sinus disease, which is usually seen in the sacrococcygeal region, mostly affects the young working population, continues with recurrences and remains as an important cause of morbidity. The aim of surgical treatment of pilonidal sinus disease is to ensure that the patient returns to work at minimum cost and in the shortest possible time. Therefore the complication rate of the procedure, the length of hospital stay and the recurrence should be low. In our study, the mean hospital stay was 2 days in both groups, the most common complications were wound infection and suture dehiscence and no flap necrosis was observed in any patient. In our study, it was found out that the return of the patients who had V-Y flap application was similar to the Limberg group and was shorter than the studies in the literature. It was remarkable that the recurrence rate in the V-Y group (4%) was less than the similar studies.

**Conclusion:** Long-term results of V-Y flap and Limberg flap techniques are similar. Although there is no statistically significant difference; V-Y flap method seems to be superior in terms of operation time, wound dehiscence and less labor loss. V-Y flap technique which is not very popular in pilonidal sinus surgery should be considered as an alternative. The results suggest that more cases and longer follow-up periods may yield more meaningful results.

**Keywords:** Pilonidal, sinus, V-Y, limberg

## PP-0518 [General Surgery Diseases]

# Follicular Dendritic Cell Sarcoma in the Spleen: Case Report

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**Introduction:** Follicular dendritic cells act as antigen presenters in humoral immunity mediated by B lymphocytes. Although follicular dendritic cell sarcomas are rarely seen in cervical lymph nodes, but may rarely show extranodal localization. In this study, we aimed to present a case with follicular dendritic cell sarcoma diagnosis in the spleen.

**Case:** A 58-year-old male patient with no history of chronic disease presented with abdominal pain and diarrhea complaints for one month. Traube area was evaluated as closed in the physical examination and splenomegaly was detected. White blood cell count was  $17.3 \times 10^3/L$ , C-Reactive Protein was 8.28 mg/L, tumor markers were CA 15.3 30.1 U/mL, and CA was 125 45 U/mL. Other laboratory values were within normal limits. Splenic long axis was markedly increased by 168 mm in computed tomography. There was a heterogeneously enhanced bilobed solid lesion in the size of 12x10x14 cm extending from the spleen hilus to the lower pole, and the mass was compressing the left kidney in the inferomedial region. No pathological findings were found in colonoscopy and gastroscopy examinations. As a result of all the examinations, exploration was performed because of primary spleen tumor. It was observed that the mass was not invasive to the surrounding tissues and was well circumscribed with the spleen capsule. Splenectomy was performed with the inclusion of the mass. No additional pathology was found in other organs in the abdomen. Histopathologic examination revealed follicular dendritic cell sarcoma. Spleen capsule was intact and surgical margins were evaluated as negative. Significant cytological atypia and diffuse coagulative necrosis were detected in the mass. Immunohistochemical examination revealed CD (cluster of differentiation) 3, CD 20, CD 117, CD 138 as negative and CD 23 and CD 21 were positive. Ki-67 showed 60% staining in the hottest area. The patient who did not develop complication was discharged with healing in the postoperative period.

**Conclusion:** Surgery in spleen-derived sarcomas is one of the preferred treatment methods.

**Keywords:** Spleen, follicular, dendritic, sarcoma

## PP-0519 [General Surgery Diseases]

# Effects of Drain Use on Intraabdominal Abscess, Collection and Drainage in Patients with Acute Appendicitis

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**Objective:** Surgery should be applied as soon as possible in acute appendicitis which is the most common pathology in patients presenting with acute abdomen. The use of drain after surgery causes a decrease in postoperative complications. The aim of this study was to determine the effect of silicone drainage and rubber drain on postoperative complications.

**Material and Methods:** Silicone and rubber drains were used in 41 patients with localized peritonitis appendicitis between November 2015 and July 2016 with the approval of the ethics committee of Erciyes University Health Application and Research Center. The patients were evaluated with ultrasonography (USG) on the 3rd postoperative day and 48 hours after the drain was withdrawn. Free fluid, loculation and abscess formation were checked in patients. After the drain was withdrawn, it was checked whether there was occlusion. Data were analyzed with SPSS 21 and evaluated by Chi-square test.

**Results:** The gender distribution of the patients was 66% male and 34% female. There was no statistically significant difference between the two groups in free fluid and abscess formation in USG controls. When the drains are evaluated for partial or complete occlusion; less occlusion was seen on the silicone drain. ( $p: 0.018$ ) Clinically, the sequential USG imaging performed in this group had lower rates of loculation than the other group. ( $P=0.003$  in the 1st USG,  $p=0.048$  in 2nd USG) Although there was no statistically significant difference between the drains when the abscess rates were compared ( $p=0.107$  in 1st USG and  $p=0.232$  in 2nd USG) the abscess rate in the group of rubber drain was 33% higher than that of silicone drain.

**Conclusion:** Although drains are being left as a current approach in abdominal surgeries, silicone drainage is preferred due to low migration and occlusion rate and low localization, results in a decrease in postoperative complications.

**Keywords:** Drain, silicone, rubber, rubber, postoperative abscess, postoperative loculation

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## PP-0520 [General Surgery Diseases]

# Appendiceal Endometriosis

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Appendectomy is the most common abdominal surgical procedure in the world. Examples of histopathologic appendectomy show acute appendicitis forming pathologies (acute inflammation, fibrosis, tuberculosis, enterobius...). Endometriosis, on the other hand, is defined as the presence of endometrial tissue that functions outside the uterine cavity. It affects approximately 5% to 50% of reproductive women and may cause abdominal pain and infertility in 50% of these patients. Endometriosis is most common in gynecological organs, pelvic peritoneum. However, endometriosis of the appendix causing acute appendicitis is a very rare condition. The aim of this study was to present this rare cause in a 42-year-old female patient being admitted to our clinic with abdominal pain and to contribute to the literature.

**Keywords:** Endometriosis, appendicitis, surgery

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## PP-0521 [General Surgery Diseases]

# Massive Lower Gastrointestinal Bleeding After Sleeve Gastrectomy: Dieulafoy's Lesion in Rectum

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**Introduction:** Dieulafoy lesion is a rare submucosal vascular enlargement and rupture which is difficult to diagnose, and may be the cause of acute abundant or recurrent gastrointestinal bleeding. Although it can be found in all gastrointestinal tract, it is most commonly seen in the stomach (61-82%). In this study, we aimed to present a case of rectal dieulafoy lesion presenting with abundant rectal bleeding after sleeve gastrectomy operation.

**Case:** A 43-year-old female patient was admitted to the emergency department with a complaint of bleeding from the anus with plenty of bright red color. BP was 70/50 mmHg and Pulse was 110/min. She had undergone sleeve gastrectomy 28 days ago because of morbid obesity (BMI 46). Massive rectal bleeding and grade 2 hemorrhoids were detected in the anal canal in the physical and rectal examination. Hb: 6.5 g/dl Htc: 21.3% Platelet: 172000 and INR was detected as normal. The patient was hospitalized with these findings. After 3 units of ERT replacement, colonoscopy was performed in our endoscopy unit after stabilizing the general condition at the 12th hour. Colonoscopy revealed a dieulafoy lesion leading to hemorrhage at the rectum 1/3 distal. Sclerotherapy was applied to the lesion and upon failing to provide hemostasis, it was achieved by applying 3 hemoclips to the bleeding lesion. Upon detecting Hb: 11 gr/dl Htc: 33.8% Platelet: 155000 and INR: normal and as there was no bleeding, the patient was discharged by recommending an outpatient clinic follow-up.



**Conclusion:** Lower gastrointestinal bleeding after sleeve gastrectomy is rare and may lead to diagnostic problems. In these cases, upper and lower GIS endoscopy should be performed for diagnostic purposes and although rare dieulafoy lesion should be kept in mind.

**Keywords:** Dieulafoy, gastrectomy, sleeve

## PP-0522 [General Surgery Diseases]

# A Case of Necrotizing Fasciitis Developing Secondary to Perianal Fistula Progressing to the Ankle in the Right Leg Dorsal Face

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**Introduction:** Necrotizing fasciitis is a rare, progressive and fatal bacterial infection characterized by necrosis of the fascia and subcutaneous tissue. Rapidly spreading necrosis in the tissues can often cause systemic sepsis and multiorgan failure. In this study, a case of necrotizing fasciitis progressing to the dorsal face of the ankle of the right leg secondary to perianal fistula is presented.

**Case:** A 70-year-old male patient was admitted to the emergency department with pain and swelling in the right leg. The patient had complaints for 4-5 days and his physical examination revealed erythema, heat increase and swelling starting from right gluteal region to the right ankle. He had a history of operation due to perianal fistula 30 and 15 years ago in addition to DM and HT. No vascular pathology was found in the lower extremity Doppler USG. In the CT, an appearance about 31x30 mm in size in the right perianal, evaluated as consistent with abscess having air value was observed and there were diffuse air values along the posterior hamstring muscles in the thigh in the right gluteal muscle planes and the findings were reported to be evaluated as significant in terms of necrotizing fasciitis with perianal abscess. The patient was operated for perianal abscess and necrotizing fasciitis developing secondary to perianal abscess. Debridement and drainage were performed and the patient was discharged on the 20th postoperative day by recommending outpatient clinic follow-up.

**Conclusion:** Early diagnosis and extensive surgical debridement are the most effective treatment to stop the rapidly progressing infectious process in necrotizing fasciitis. This treatment should be combined with intensive antibiotics and other measures in patients with systemic clinical findings.

**Keywords:** Fasciitis, fistula, perianal

## PP-0523 [General Surgery Diseases]

# Our Experience with Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy and Our Early Results

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**Introduction:** Reducing tumor volume increases the response to systemic chemotherapeutic treatment. Theoretically, cytoreductive surgery (SRC) is used to treat macroscopic disease and hyperthermic intraperitoneal chemotherapy (HIPEC) is used to treat microscopic disease and they are the methods used in combination in one session. Cases of peritoneal carcinomatosis (PC) originating from different organs are treated by using SRC and HIPEC in combination by the development of new and effective chemotherapeutic drugs, increased surgical experience and effective supportive therapies. In this study, it was aimed to share our short-term experiences related to this technique applied to patients with advanced intraabdominal cancer.

**Material and Methods:** The results of SRC and HIPEC performed in 13 patients with PC between June 2015 and December 2017 were shared. HIPEC was applied by laparoscopic method in all patients. One 26 Fr. silicone thoracic tube from the right upper-lower abdominal quadrants, and one from the left upper-lower abdominal quadrants were placed in the intraabdominal cavity and chemotherapeutics were administered by the medical oncologist at a temperature of 42.5 ° C for an appropriate period.

**Results:** Of 13 patients, 12 were female (92.3%) and one was male (17.7%). The mean age of the patients was 53.07. The perioperative mean peritoneal carcinomatosis index score of the patients was calculated as 20.23. The CC (completeness of cytoreduc-

tion) score was 0 in two patients with recurrent ovarian carcinoma, and it was 2 in three patients. CC 0 resection was performed in two patients with peritoneal carcinoma and CC 1 resection was performed in 2 patients. The CC score was 1 in 3 patients with colon-derived tumors. The patient with the Krukenberg tumor had a CC score of two. All patients except the patient with the Krukenberg tumor responded well to the treatment. Two patients had a wound site problem as morbidity (15%) and one patient developed gastric and colon perforation (7.7%). Mean survival was 510 days in recurrent ovarian serous carcinoma, 415 days in peritoneal-derived carcinoma, 283 days in colon adenocarcinoma, and 153 days in gastric carcinoma. One of the patients who was operated due to ovarian recurrent serous adenocarcinoma died on the postoperative 50th day due to adjuvant treatment cytotoxicity and one patient died due to recurrence on the postoperative 630th day. The patient with the Krukenberg tumor died on the 153th postoperative day during palliative care.

**Conclusion:** In our early outcomes, we observed that full response to maximum cytoreduction performed with aggressive surgery can be achieved with acceptable morbidity rates and that the survival time of these patients can be improved by the use of appropriate drugs in appropriate time and conditions in the form of HIPEC for the treatment of ovarian, peritoneal, and colorectal PC cases. We think that large, randomized, controlled and long term follow-up studies should be performed in order to develop this technique. We believe that this may be done by raising our colleagues' awareness of this approach and by the patients' referral to experienced centers.

**Keywords:** Cytoreductive surgery, hyperthermic intraperitoneal chemotherapy, carcinomatosis peritonei

## PP-0524 [General Surgery Diseases]

# Multiple Focal Necrosis in the Spleen: Brucellosis

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**Introduction:** Brucellosis is a common zoonotic infection and around 500,000 cases are reported worldwide annually. Although seen all over the world it is more common in Middle East, Mediterranean and Arabian Peninsula countries. It is more common in individuals dealing with livestock and using non-pasteurized dairy products. Brucellosis can involve any organ as a systemic infection and it may be asymptomatic or mortal. *B. melitensis*, *B. abortus*, *B. suis*, *B. canis* and *B. ceti* are known as pathogenic strains in humans. Brucellosis is a very rare etiologic cause for the diagnosis of the splenic necrosis and abscess can be diagnosed with imaging methods. In our case, we present a patient who had necrosis in the spleen due to brucellosis in the spleen.

**Case:** 81 years old female patient was admitted to the emergency service with fatigue, abdominal pain and high fever. She had no known systemic disease and it was learned that she lived in a rural area and her family was engaged in animal husbandry. Her physical examination revealed tachypnea, tachycardia and diffuse tenderness across her abdomen, which was more apparent in the left upper quadrant. Complete blood count revealed thrombocytopenia, lymphopenia and mild monocytosis. Biochemical parameters were normal. The long axis of the spleen was measured 19 cm (splenomegaly) in the ultrasonographic examination. Parenchymal heterogeneity of the 8 cm nodular area was recorded in the upper pole of the spleen in CT. The long axis of the spleen is 19 cm (splenomegaly). There was a hypodense lesion according to parenchyma, holding wide space in superior half with a size of 11x8 cm on the widest spot and irregular border and evaluated in favor of infarct?. In all intraperitoneal recessions, free fluid measured 9 cm in the pelvis at the deepest part was noted. In the follow-up period, abdominal pain did not regress and fever did not decrease and elective splenectomy was performed with the diagnosis of spleen infarct. The number of leukocytes in the postoperative 1st day was increased to  $45000 \times 10^9/\mu\text{L}$ . The cause of leukocytosis was investigated by the infectious disease department and no significant infection focus was found. The number of leukocytes decreased to  $16 \times 10^9/\mu\text{L}$  on the 10th postoperative day. During this period, her fever continued to be measured up to 38°C 1 to 2 times a day. Pathology result was reported as acute inflammation and splenic tissue in which multiple necrosis areas were observed (Picture 3). Brucella (Rose Bengal) Agglutination Test, Brucella (Coombs) Agglutination Test, and Brucella Tube Agglutination test were positive. Doxycycline 2x100 mg and Rifampicin 1x600 mg tablet for brucellosis were added to the treatment. The patient's general condition was improved and the patient was discharged after an infection clinic control was recommended.

**Conclusion:** Brucellosis is an endemic disease in Turkey. It is a multisystemic disease, spleen abscess, infarction and necrosis are rare complications. The clinical presentation of spleen infarction is non-specific, with left hypochondrial pain, fever, nausea and vomiting. Computed tomography is the best examination showing spleen infarct. Abscess foci in the spleen in acute period are seen as multiple hypoechoic nodules in USG. While conservative treatment with combination of Rifampicin, Doxycycline, Streptomycin and Ciprofloxacin is sufficient in the early stages of splenic abscess, splenectomy is necessary when large spleen abscess, diffuse necrosis develops as in our case.

**Keywords:** Brucellosis, acute abdomen, spleen necrosis

## PP-0525 [General Surgery Diseases]

## Venous Port Experience of our Department of General Surgery

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**Objective:** Venous catheters used for chemotherapy, total parenteral nutrition and fluid therapy have been used for a long time in patients receiving oncologic therapy. Complications such as pneumothorax, perforation, infection and thrombosis may be seen despite benefits. In this respect, our aim is to compare and share our experience with the literature.

**Material and Methods:** 75 patients in whom permanent venous catheters were inserted at the Health Sciences University Haseki Training and Research Hospital Department of General Surgery were evaluated retrospectively with clinical and demographic data.

**Results:** Port for chemotherapy was placed in a total of 75 patients. The mean age of the patients was 58.2 years, and 62% of them were female and 38% of them were male. Pneumothorax occurred in 3 patients as a complication. One patient died due to major vascular injury, 1 patient developed malposition and 1 patient had skin necrosis.

**Conclusion:** Although permanent venous catheter for chemotherapy can be used safely in experienced hands and a comfortable method for the patient, unexpected results can be rarely encountered.

**Keywords:** Chemotherapy, venous port, chemotherapy

## PP-0526 [General Surgery Diseases]

## Retrocaval Ganglioneuroma: A Case Report

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**Introduction:** Ganglioneuromas are benign and rare tumors with slow course originating from sympathetic nerve ganglion cells. These tumors originating from paravertebral sympathetic ganglia are most commonly seen in mediastinum, retroperitoneum and adrenal glands and usually in the ages of 10-20. It presents with abdomen and/or back pain or compression symptoms in asymptomatic cases. However, the vast majority of cases are asymptomatic and therefore may not be detected until they reach large dimensions. Although they may secrete hormones clinically, those who are retroperitoneal are generally inactive.

We aimed to present a patient with retroperitoneal ganglioneuroma in the liver posteromedial hilar region.

**Case:** It was learned from the anamnesis of a 55-year-old male patient that he had a 2-month history of back and right upper quadrant pain and abdominal ultrasonography revealed a mass in the caudate lobe of the liver and thus was referred to our clinic. There was no feature in the patient's medical history. Physical examination revealed minimal tenderness in the right upper quadrant. Laboratory tests and tumor markers were within normal limits. Abdominal computed tomography (CT) revealed no abnormal findings except calcified mass compressing the vena cava inferior at a size of 6x3x6 cm in the retrocaval area of the liver with liver hilar location. Total mass excision was performed in the patient. She was discharged on the 3rd postoperative day without any problem. The pathology result was reported as ganglioneuroma. The patient is still under follow-up in the first year.

**Conclusion:** Ganglioneuromas are very rare tumors. They may be confused with other neural origin tumors (paraganglioma, schwannoma), lymphadenopathies, or other malignant tumors. They are locally grown. They do not carry hematogenous or lymphatic metastases. Total excision is the ideal treatment.

**Keywords:** Ganglioneuroma, paraganglioma, schwannoma

## PP-0527 [General Surgery Diseases]

## Experience of Single Center Splenectomy Between 2007 and 2017

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**Objective:** The spleen is an organ that has important functions especially in the hematological and immune system. Splenectomy is a type of operation performed in many diagnostic and therapeutic diseases. In this study, we aimed to present our cases of traumatic and non-iatrogenic splenectomy.

**Material and Methods:** The data of 135 patients who underwent splenectomy at İstanbul Training and Research Hospital between 2007 and 2017 were retrospectively analyzed. Demographic characteristics, indications of operation, length of hospital stay, postoperative pathological diagnoses and complications were evaluated.

**Results:** The mean age of the patients was 44.9 years, 95 (70.3%) of the patients were female and 40 (29.7%) were male. 103 (76.2%) patients underwent open surgery and 29 (21.4%) patients underwent laparoscopic splenectomy. In 3 patients, the surgery starting laparoscopically was terminated with open surgery. While ITP was the most common cause of operation with 68 (50.3%) people, hypersplenism was the second most common indication for splenectomy and hemolytic anemia was the third. The mean postoperative hospital stay was measured as 6.09 days. This time was 6.57 days in open surgery and it was 4.86 days in laparoscopic operations. Complications were observed in the postoperative period in 24 (18.5%) patients. Among these, the most common complication was pulmonary complication (n: 7, 5.7%) and then wound infection (n: 4, 2.9%), whereas arterial thrombosis (n: 3, 2.2%) was found to have more frequent complication rate than expected. The complication rate in laparoscopic surgeries was 10.2% and the complication rate was 21.3% in open surgeries. The rate of complication was found to be 37.9% in patients over 60 years of age, whereas this rate was found to be 17.2% in patients under 60 years of age and a significant difference was observed (p: 0.0466).

**Conclusion:** The indications and operation methods of splenectomy are changing over the years. Laparoscopic approach, a more noninvasive procedure in splenectomy, has been increasing in recent years as in all areas of the surgery. When the complications are examined, the most striking point is the increased tendency towards arterial occlusion.

**Keywords:** Splenectomy, complication, thrombosis, laparoscopic

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## PP-0528 [General Surgery Diseases]

# Sleeve Gastrectomy and Incidental Gastrointestinal Stromal Tumors

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**Introduction:** The popularity of bariatric surgery has increased in recent years with increasing obesity in our society. The development of minimally invasive technology and an increasing number of laparoscopic bariatric procedures have resulted in unsuspected unexpected pathologies prior to surgery. The incidence of incidental pathology during laparoscopic bariatric surgery is around 2%, and gastric gastrointestinal stromal tumors (GIST) have been found in 0.8% of cases. In this study, we aimed to present our cases of gastrointestinal stromal tumors which were detected incidentally after sleeve gastrectomy.

**Case:** 301 patients underwent sleeve gastrectomy due to morbid obesity at Health Sciences University İzmir Bozyaka Health Application and Research Center between 2015 and 2018. Endoscopic examination was performed in all cases preoperatively and no pathology was detected. Gastrointestinal stromal tumor was detected in the pathological examination of postoperative gastrectomy specimens in 3 (1%) cases. Two of these patients were male and one of them was female and the mean age of the cases was 48 (38-56). The mean body mass index of the cases was 45.66 (44.1-47.8). The tumor size was 0.5, 0.6 and 0.7 cm in the pathological examination performed. They were included to the category of no risk in terms of progressive disease risk according to Miettinen Lasota classification pathologically due to mitosis below 50 BBA 5, the size being below 2 cm and gastric location in 3 cases. Follow-up was recommended to the patients evaluated in the Oncology Council and they have been followed for 18.3 months (2-56) without any problem.

**Conclusion:** Pathological examination of the specimen after sleeve gastrectomy is important. Incidentally detected cases of gastrointestinal stromal tumors should be evaluated in a multidisciplinary approach in oncology councils and should be followed in terms of future pathologies.

**Keywords:** Sleeve, stromal, tumor

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## PP-0529 [General Surgery Diseases]

# Isolated Liver Cyst Hydatid Rupture after Blunt Trauma and Anaphylactic Shock

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**Introduction:** Cyst hydatid is a public health problem that is endemic in many countries of the world. There are many complications of liver hydatid cyst. In this study, we aimed to present our case who presented with isolated hydatid rupture after blunt trauma and anaphylactic shock.

**Case:** A 17-year-old male patient was referred to our emergency service because of a out of the vehicle traffic accident. The general condition of the patient was moderate, he had open consciousness and open cooperation and limited orientation. His values were as such: blood pressure: 80/50 pulse: 120/min and he was filiformic. The patient had diffuse tenderness and defense in the abdomen in the physical examination. The laboratory findings were WBC: 23000 HB: 12,5 AST: 281 ALT. Abdominal CT revealed fluid around the liver, hemorrhagic fluid in the liver and there was diffuse free fluid in the abdomen. Hypovolemic shock was considered and the patient was taken into emergency operation. In intraoperative exploration, there was serohemorrhagic fluid, daughter vesicles and pericyst membrane in the abdomen. The giant cyst hydatid lesion, which filled the whole liver segment 5-8, was probably perforated into the abdomen secondary to trauma. There was no pathology in other solid and luminal organs in the exploration. The operation was terminated by washing the abdomen with 3% NACL. The patient was discharged from the hospital on postoperative 5th day postoperatively.

**Conclusion:** Isolated liver cyst hydatid rupture and anaphylactic shock following blunt trauma is a rare complication of hydatid cyst. Cyst hydatid rupture after trauma should be taken into consideration in emergency surgical practice in regions where cyst hydatid is seen endemic as in our country.

**Keywords:** Hydatid, cyst, trauma

## PP-0530 [General Surgery Diseases]

# Forgotten Foreign Body in Incision Scar: Surgical Suture Material Container

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**Objective:** Cases in whom some complications occur after years due to some forgotten foreign bodies (sponge, surgical instrument, pet, etc.) have been reported in the literature. Complications due to forgotten foreign bodies have not been reported from centers that usually perform the operation due to medico-legal problems. Therefore, there is no clear information on the frequency of detection. In our case, we will present a case with a forgotten surgical suture material container, which is associated with appendectomy performed in Afghanistan and which is thought to be for drainage under the skin, was detected and taken under local anesthesia.

**Case:** It was learned from the history of a 21-year-old Afghan female patient who presented to the general surgery outpatient clinic with a complaint of painful swelling and metal-like, hard foreign body appearance on the upper part of the appendectomy surgery incision that she underwent appendectomy because of appendicitis in Afghanistan 6 months ago and she had a hardness in the incision line from that date. In the examination of the patient at the outpatient clinic, a metallic-colored appearance extending from the superior starting point of the incision line for the last 15 days, approximately 5-6 cm long and 2-4 mm thick, just below the scar, appearing 2-3 mm long hard object was detected in the area where presence of foreign body was described. When the object was intended to be moved, it was seen to be adherent to the tissue and the patient felt pain. It was planned to be removed by local anesthesia. The body was removed from the visible part of the body by applying the local anesthetic agent along the incision line. It was observed that the object was a vicryl suture material container folded with a width of 1 cm. However, the purpose of placement of the body could not be understood and it was thought to be due to drainage and no information could be obtained whether the object was forgotten or not.

**Conclusion:** Although there are no extensive literature data due to medicolegal problems after surgical operations, forgetting foreign body and some complications related to it develop. In order to prevent possible complications, more attention should be paid to the material counts and the removal of drains and sutures after surgery.

**Keywords:** Surgery, appendectomy incision, foreign body

## PP-0531 [General Surgery Diseases]

# Abdominal Cocoon- Sclerosing Encapsulated Peritonitis (SEP)

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**Objective:** Sclerosing encapsulated peritonitis (abdominal cocoon) is rarely seen. Although different etiologic factors are defined for this disease, some patients may be idiopathic. Preoperative diagnosis is difficult to establish with the current diagnosis methods and most of the cases can be diagnosed during surgery. We aimed to present our case with sclerosing encapsulated peritonitis which is one of the rare causes of mechanical intestinal obstruction.

**Case:** A 50-year-old male patient was admitted to the emergency service with a two-day abdominal pain. It was learned that he had a history of intermittent constipation, vomiting and weight loss. Physical examination revealed distended minimal tenderness with palpation in the abdomen. The patient was taken into operation because of suspicion of internal herniation in abdominal computed tomography. It was observed that the peritoneal layer was thickened and formed gator wrapping around the small intestine. The peritoneal layer was excised and the intestinal adhesions were removed. No necrosis and perforation were observed. Although the patient had defecation on the second postoperative day, intermittent abdominal pain and impairment of oral tolerability were observed. The patient was given oral and parenteral nutrition support and corticosteroid treatment was started. The patient was discharged on the 35th postoperative day. Pathology revealed nonspecific chronic inflammation, sclerotic changes in collagen, and fibrosis-walled tissue containing dystrophic calcification areas. No feature was observed in the immunological and infectious examinations requested in order to investigate the etiological factors.

**Discussion:** It has been reported that sclerosis encapsulated peritonitis is seen in patients who receive peritoneal dialysis in the young age, who use beta-blockers, undergo recurrent peritonitis, peritoneal chemotherapy, liver cirrhosis and who are inserted peritoneal shunt. Despite preoperative diagnosis difficulties, patients with partial obstruction can be treated conservatively if diagnosed by careful evaluation. In the clinic it presents with loss of appetite, weight loss, nausea, vomiting, colic-style abdominal pain attacks and constipation. It is possible to observe palpable mass in the physical examination and the small bowel loops surrounded with peritoneum in the imaging methods. Excision of the peritoneum and adhesiolysis is recommended in patients developing total obstruction. The recurrence and morbidity of the disease is high. The use of immunosuppressive agents, corticosteroids and tamoxifen are recommended for medical treatment.

**Conclusion:** Sclerosing capsulated peritonitis may lead to severe complications such as severe malnutrition, sepsis and death. If preoperative diagnosis is made partial obstruction findings are present medical treatment is recommended if preoperative diagnosis cannot be made it is recommend to avoid aggressive surgical treatment.

**Keywords:** Abdominal cocoon, sclerosing encapsulated peritonitis, treatment options

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## PP-0532 [General Surgery Diseases]

# Giant Peritoneal Mice: Case Presentation

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**Introduction:** Peritoneal free body is a rare phenomenon known as peritoneal mice. This condition, which has been known for approximately 300 years, is usually detected during laparoscopy/laparotomy, radiologic examination or autopsy. It is mostly 2-5 cm in size. Those above five cm are called giant free bodies. It is also known as boiled egg phenomenon due to its round white color image. Although its pathogenesis has not been fully elucidated, it is thought to occur as a result of saponification and calcification of the autoamputated parts within the peritoneal cavity as a result of the deterioration of the circulation of the fatty tissues on the appendix epiploica, omentum, adnexal organs or pancreas. The most common form is caused by torsion of appendix epiploica. It has been reported in the literature that it is more common in older age group and males. Clinically it is usually asymptomatic. In symptomatic cases, it manifests itself with abdominal and/or pelvic pain, urinary complaints and intestinal obstruction. We aimed to present a patient with a peritoneal free body detected incidentally in his abdominal pain examination.

**Case:** A seventy-four year-old male patient presented with abdominal pain. The patient's anamnesis revealed that he had complaint of intermittent abdominal pain for the last 2 months and that he had no other diseases and previous surgery. Physical examination findings and laboratory tests were within normal limits. In the abdominal tomography, no finding was detected except for 6x5x4 cm well-circumscribed mass lesion located on the midline in the small intestine meso. The mass unrelated with any organ/tissue was removed preoperatively. Pathological examination revealed fibroma (calcified fibrous nodule). The patient was discharged without any problem on the fourth postoperative day.

**Conclusion:** Peritoneal free body is a rare entity. The most appropriate treatment approach for these masses, which is mostly detected incidentally and cannot be diagnosed with preoperative physical examination and imaging techniques, is surgery.

**Keywords:** Abdominal mass, free body, fibroma

## PP-0533 [General Surgery Diseases]

## Paget's Disease of Perianal Region, Surgical Treatment with Elliptic Rotational Flap Technique

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**Introduction:** Perianal Paget's Disease (PPH) is a malignant disease of epithelial origin, whose etiology is unclear, originating from Paget cells in the breech region and sweat glands, coexistence with anal canal malignancies varying between 33% and 86%. PPH constitutes approximately 20% of Extramammary Paget diseases. It may develop as primary or secondary. The disease is typically characterized by an eczema-like itchy, painful, erythematous skin lesion. It can be confused with other diseases of the anorectal region since it is not mostly considered primarily. The definitive diagnosis is made by biopsy taken from the anoderm and its histological examination. Surgical excision is the preferred treatment of PPH and can be performed after excision surgery. Abdominal abdominoperineal resection may be the best choice in very large lesions. If the degree of invasion is high and sphincter involvement is present.

**Case:** The patient with painful, itchy lesion in the perianal region for the last 1 year, was referred to our outpatient clinic with the diagnosis of Extramammary Paget Disease as a result of the pathological examination of the punch biopsy performed by the dermatology department. The patient had no additional disease and previous operation except for the known diabetes mellitus. In physical examination, there was an erythematous, ruptured, approximately 4 cm diameter lesion in the range of 2-5 hours in the lithotomy position in the perianal region. There was no palpable mass and tenderness in rectal examination. The patient had grade 1-2 external hemorrhoidal disease. The patient's routine biochemical parameters and complete blood count were normal. Then rectosigmoidoscopy (RSS) was performed in the patient to exclude the anal canal malignancies. No significant pathology was observed in RSS. Then pelvic magnetic resonance imaging (MRI) was performed in order to determine whether there was extension of the disease to the internal and external sphincter or not. There was no extension to the anal sphincter in MR imaging. After the patient's informed consent was obtained, it was decided to perform surgery. After extensive local excision of the lesion, gluteal reconstruction was performed. The patient was discharged without any complaints during the postoperative period. Control examination revealed that the surgical area was completely healed, there were no problems in the flap, and the sphincter tone was complete.

**Conclusion:** In this case report, we aimed to present that the elliptic rotational flap application with wide local excision can be successfully performed in Perianal Paget's disease and other non-invasive diseases of anoderm. There are numerous reconstructive techniques defined in the literature as gluteal reconstruction, such as split thickness skin graft, S flap reconstruction, elliptical rotational flap, house flap, bilateral V-Y advancement flap and split thickness skin graft and simultaneous V-Y advancement flap. We decided to apply the elliptical rotational flap technique to our patient because the lesion only involved one side of the perianal region and its diameter is not too wide.

**Keywords:** Flap, paget, perianal, reconstruction

## PP-0534 [General Surgery Diseases]

## Rare Judicial Cases: Two Cases with Cocaine-Containing Body Package Syndrome

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**Introduction:** The cocaine, which is an alkaloid structure with crystalline alkaloid structure obtained from the plant named Erythroxylon Coca, is one of the most dangerous substances with a substance dependence potential. The individuals transporting drugs in body cavities illegally is called package body. The most frequently used body cavities are gastrointestinal system (GIS) from the mouth to the anus and vagina. It is seen that latex, aluminum foil or condoms are often used as packaging material. Fatal complications may occur due to leakage or bursting of packages. GIS obstruction or intoxication may occur. In this study two cases with package body syndrome brought to the emergency department by the judicial authorities in Antalya, which is an intense touristic center, will be presented.

**Case:** Two foreign nationals were suspected and arrested at Antalya International Airport by the law enforcement officers and brought to emergency service in September and October 2017. In the first evaluation, the consciousness states of both were

clear and vitals were stable. In the examinations, blood parameters were found to be natural and a large number of foreign bodies located in especially rectum in standing direct abdominal graph. The first patient; A 26-year-old female patient had good general condition and she was recommended pulpy food and laxatives since the packages were mostly in rectum in standing direct abdominal graph. After 4 days of follow-up, all packets were discharged without complications and the packets and the patient were handed over to the police forces. The second patient; A 23-year-old male, was conscious, cooperative and his vitals were stable. Approximately 55-60 capsule-shaped foreign bodies were seen in standing direct abdominal graph. Laxative and pulpy food was recommended. The patient who had loss of consciousness and developed ileus was intubated. It was seen that a half opened cocaine capsule broken in the middle and partly covered with condom, wrapped in folio was removed from the anus. Other capsules could not be reached by the rectal examination. After tomography it was seen that the number of capsules, which was 50-60, decreased to 16 and did not lead to complete obstruction. In the intensive care follow-up, nasogastric catheter was inserted and the intestinal system was washed with ringer lactate. The patient was extubated after the second day of supportive therapy and the other capsule was removed. He was discharged on the fourth day of his admission and was handed to the law enforcement officers with the packages.

**Conclusion:** Health workers often encounter package bodies due to toxic effects of the substance taken, intestinal obstruction, or medical examination after arrest. The life-threatening condition of these patients is usually due to the toxicity of the cocaine capsules as a result of leaks inside the intestine. While no problem occurs in some patients there is no problem, loss of consciousness, intubation and death can be seen in some patients. The way to be followed in these patients is determined according to the clinical status of the patients in a multidisciplinary approach. Follow-up, intestinal irrigation and laxative can be necessary in asymptomatic patients; control of blood pressure, agitation and hyperthermia control may be necessary in toxicity; and surgical intervention may be necessary for obstruction and perforation.

**Keywords:** Judicial case, intestinal obstruction, cocaine, drug, body package syndrome

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## PP-0535 [General Surgery Diseases]

# A Rare Etiology in the Differential Diagnosis of Intraabdominal Mass: Cystic Lymphangioma

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Cystic lymphangioma (CL) is a rare benign congenital malformation of the lymphatic system. It is located in neck, axilla, intraabdominal and retroperitoneal regions. It is a cystic tumor that is separated with septas macroscopically. As they are very similar in structure, especially multicystic mesothelioma (MM) should be considered in the differential diagnosis. The patient was admitted with abdominal pain and bloating complaints. Exploration decision was taken for the patient upon detection of multicystic mass having subhepatic location whose margin with the structures such as adjacent duodenum, kidney, inferior vena cava, and choledoch cannot be clearly distinguished. In our exploration, the cystic mass, adhered to the choledoch which was thought to originate from the hepatoduodenal ligament and adjacent to the second part of the duodenum, vena cava inferior and right kidney was excised as unblock. In the pathological examination, the tumor was composed of cystic structures filled with serous fluid. The histological sections of hemotoxylin-eosin staining revealed abundant lymphatic vessels and cystic dilatations of these vessels. Cells were immunohistochemically CD31-CD34 positive and WT-1 negative. In this way it was distinguished from MM. In the light of these findings, the patient was diagnosed with CL. In our presentation, we shared a case with this pathology that is rare in the literature.

**Keywords:** Cystic lymphangioma, multicystic mesothelioma, CD 31-34, intra-abdominal mass

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## PP-0536 [General Surgery Diseases]

# Sacral Neuromodulation in the Treatment of Fecal Incontinence: Our Short-Term Experience

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**Objective:** Fecal incontinence is a serious physical and psychological condition affecting the patient's quality of life. Sacral neuromodulation has emerged as a treatment option for fecal incontinence. In this study, we aimed to share our experience of sacral neuromodulation in fecal incontinence.



**Material and Methods:** Prospective accumulated data of six patients who underwent sacral neuromodulation due to fecal incontinence since August 2017 were retrospectively analyzed. Fecal incontinence score, fecal incontinence and quality of life scoring system, anorectal manometry and incontinence diary data were routinely evaluated in the pre-and post-treatment evaluation period.

**Results:** Six patients underwent sacral neuromodulation with the diagnosis of fecal incontinence. Four patients were female and 2 of them were male. The mean age of the patients was 53.5 (range: 32 to 68) years. The transient catheter was removed due to infection during the test period and the remaining 5 patients were implanted with a permanent sacral neuromodulation implant. All patients were using underpad for neuromodulation because of incontinence. Only one patient needed to use an underpad after neuromodulation. Three patients had no complaints of incontinence after the procedure, there was a decrease of incontinence complaint in one patient at a rate of 80% in one patient and at a rate of 60% in other patient. Fecal incontinence score and quality of life scores improved in all patients.

**Conclusion:** Sacral neuromodulation may be an effective and safe treatment option in selected patients with fecal incontinence.

**Keywords:** Fecal incontinence, sacral neuromodulation, incontinence

## PP-0537 [General Surgery Diseases]

# A Rare Spleen Lesion: Sclerosing Angiomatoid Nodular Transformation

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**Introduction:** Sclerosing angiomatoid nodular transformation (SANT) is one of the rare vascular lesions of the spleen. In this study, we present a patient who was referred to us for operation due to mass in the spleen by hematology and whose pathology was reported as SANT.

**Case:** A 51-year-old female patient was referred to our hospital's gastroenterology and hematology outpatient clinics with splenomegaly and splenic mass in the upper pole of spleen after abdominal ultrasound (USG). The patient did not have any complaint except intermittent mild abdominal pain. It was learned that the patient without a history of drug use and additional disease, underwent appendectomy operation 10 years ago. No pathological findings were detected in physical examination. Abdominal computed tomography (CT) was performed in the patient who did not have any pathology in the laboratory values and the mass with a size of 87x84 mm which was thought to be due to lymphoma was reported in splenic upper pole. Peripheral smear and bone marrow biopsy performed by hematology did not reveal any pathological findings. The patient to whom surgery was recommended was referred to our department. The surgery was performed after necessary preoperative preparation. A mass of 8 cm in the left subcostal incision in the upper pole of the spleen was observed and splenectomy was performed. The patient who had no problem except for atelectasis in the postoperative period was discharged on the 4th postoperative day. As a result of the pathology, a well circumscribed solid lesion with a size of 8x8x3 cm including yellow gray sclerotic areas was observed in the spleen with a size of 16x14x8 cm in the macroscopic examination. Microscopic examination of the lesion showed multinodular appearance and the vascular structures and fusiform cells at the centers of the nodules. CD 34, CD 31 and CD 8 were found to be positive. No problems were encountered in the follow-up of the patient.

**Conclusion:** SANT is one of the rare vascular lesions of the spleen. It is a benign lesion and it is caused by red pulp. It is more common in middle age and women. The etiology has not been clearly elucidated. It is usually asymptomatic and large ones may cause abdominal pain. Sometimes it may cause thrombocytopenia and anemia picture. The diagnosis is mostly incidental. It is known that this lesion, whose incidence has increase with the development of imaging techniques, was gained to the literature in 2004. Abdominal USG and CT are successful in the pre-diagnosis and the abdomen may show hypodense and multinodular appearance on CT. The definitive diagnosis can usually be made by postoperative pathological examination. Needle biopsies are not recommended because they can lead to intraabdominal seeding in potentially malign pathological conditions. Benign lesions such as hemangioma, hamartoma, hemangioendothelioma and malignant lesions such as angiosarcoma are present in the differential diagnosis of SANT. Splenectomy is recommended in the treatment of benign lesions, because of malignancy exclusion and the risk of rupture in large ones. The prognosis is good and recurrence has not been reported in the literature.

**Keywords:** Sclerosing angiomatoid nodular transformation, splenic mass, abdominal pain

## PP-0539 [General Surgery Diseases]

# Unicentric Retroperitoneal Mass: Castleman's Disease

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**Introduction:** Castleman's disease (CH) is a rare disease characterized by benign lymph node hyperplasia. Unicentric Castleman's disease (UCH) has a survival rate of 95.3% and is usually asymptomatic. In this report, we present a 36-year-old male patient who presented with dyspepsia and was diagnosed as UCH incidentally.

**Case:** A 36-year-old male patient was admitted to the external center with the complaint of indigestion after meals for 4-5 months and a mass was detected in the left pararenal area in the abdominal ultrasonography (USG) and the patient was referred to us for advanced examination and treatment. There was no comorbid disease except for hypertension and coronary artery disease in his history. His family history was without any feature. Physical examination revealed no pathological findings except minimal sensitivity in the left colic region. There was no pathological findings in his laboratory values. Intravenous opaque thoracoabdominal computed tomography (CT) revealed a mass lesion of 54x33 mm in retrocaval located at the left renal hilus level compressing the vena cava (VC) with internal structure of homogenous solid density, evaluated primarily in favor of retrocaval lymphadenopathy due to location. Biopsy could not be obtained for tissue diagnosis due to localization of the mass and the operation decision was made. In the exploration, the mass was seen to invade the left renal vein in the left renal hilus behind VC. The patient underwent a partial resection due to cytology of the lymphoid tissue during the frozen examination performed preoperatively. There was no other pathology in abdomen in the exploration. The patient was discharged on postoperative 2nd day without any complication. The histopathological diagnosis of the patient was reported as hyaline vascular type Castleman's disease. There was no change in the size of the mass in CT performed in the postoperative 1st year and no other focus was detected.

**Conclusion:** Castleman's disease is one of the rare causes of lymphadenopathy. It was described as a chronic nonspecific inflammatory formation in terms of histological pattern when it was first defined by Castleman in 1956. The etiology of the disease has been focused on viral stimulation and human immunodeficiency virus and human herpes virus-8 were accused due to histopathological appearances involving lymph node features associated with systemic symptoms such as fever and lymphadenopathy in patients over time and chronic viral infections. UCH is more benign than multicentric CH and divided into two histological types. Hyaline vascular type compression symptoms in 90% of the cases can be seen, but they are usually asymptomatic and are incidentally detected. Plasma cell type is seen in 10% of cases and this type is detected more mesentery and retroperitoneal. Although there is no randomized trial, complete removal of the mass is sufficient in the treatment of UCH and it is the gold standard method. It has also been reported that the removal of the mass partly is beneficial in cases where surgical excision is not possible. Recurrence is very rare and is usually associated with incomplete resection or neglected lymph nodes in the first operation. Systemic symptoms and laboratory abnormalities, if any, are eliminated by total resection. In conclusion, although UCH is a rare condition, it should always be kept in mind in the differential diagnosis of retroperitoneal masses.

**Keywords:** Castleman's disease, unicentric, retroperitoneal mass

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## PP-0540 [General Surgery Diseases]

# Relationship between Body Mass Index and Irritable Bowel Syndrome Subtype According to Rome 4 Criteria

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**Objective:** Irritable bowel syndrome (IBS) is a common disease in the community and deteriorates the quality of life. The patients with irritable bowel syndrome was examined retrospectively and their data were analyzed to investigate the relationship between body mass index and IBS subtypes of the patients.

**Material and Methods:** 452 patients were admitted to Ordu University Training and Research Hospital Department of General Surgery and were diagnosed with irritable bowel syndrome according to Rome 4 criteria. The subtypes of irritable bowel (with constipation, with diarrhea, complex and unclassified) of the patients and the patients with body mass indexes of <20 kg/m<sup>2</sup>, 20-25 kg/m<sup>2</sup>, 25-30 kg/m<sup>2</sup>, 30-35 kg/m<sup>2</sup> and >35 kg/m<sup>2</sup> were analyzed retrospectively.

**Results:** Body mass index values of 452 patients with irritable bowel syndrome were detected as <20 kg/m<sup>2</sup> in 16 patients (3.5%), 20-25 kg/m<sup>2</sup> in 92 patients (20.3%), 25-30 kg/m<sup>2</sup> in 134 patients (29.6%), 30-35 kg/m<sup>2</sup> in 161 patients (35.6%) and >35 kg/m<sup>2</sup> in 49 (10.8%) patients. Of these 452 patients, 78 (17.2%) patients were diarrhea-weighted, 214 (47.3%) patients were constipation-weighted, 124 patients were mixed weight (27.4%) and 35 (7%) patients were classified as unclassified according to Rome 4 criteria. In the study, no statistically significant difference was found between irritable bowel syndrome subtypes of patients classified according to body mass index (p>0.05).

**Conclusion:** IBS is a functional bowel disease characterized by changes in the frequency and form of stool, without any organic cause, having a course of abdominal pain and discomfort. Epidemiological studies show that body mass increase is associated with chronic gastrointestinal complaints such as dyspepsia and IBS. This relationship suggests that the increase in body mass may be associated with pathophysiology of functional bowel diseases. In our study, the patients

were diagnosed according to Rome 4 criteria and the IBS subtype and body mass index were measured. In our study, no statistically significant relationship was found between body mass index and irritable bowel syndrome subtype according to Rome 4 criteria ( $p>0.05$ ).

**Keywords:** Irritable bowel syndrome subtypes, body mass index, Rome 4 criteria

## PP-0541 [General Surgery Diseases]

# Splenic Inflammatory Pseudotumor: A Case Report

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**Introduction:** The etiology of inflammatory pseudotumor has not been elucidated and it is a condition thought to be benign. Although this lesion is mostly encountered in the lung, it is rarely seen in other tissues such as soft tissues, liver, eyes, lymph nodes, gastrointestinal system, heart, brain, bladder, prostate, kidney and spleen. In this study, splenic pseudotumor case detected with pathological examination in the patient who was operated due to a mass in the spleen will be presented.

**Case:** A 39-year-old woman was admitted to the external center with a complaint of pain in the left quadrant. She underwent abdominal ultrasonography (USG) and a spleen mass was detected and she was referred to our center. The patient did not have active complaints. No significant feature was detected in the physical examination of the patient who had no history of operation, drug use and a known comorbid disease. No abnormal value was found in blood biochemistry values. Abdominal computed tomography (CT) showed a mass with a size of 6x6 cm in the normal sized spleen and spleen sub-pole thought to be pertaining to hemangioma or lymphoma showing minimal enhancement. Operation was recommended to the patient. Laparotomy revealed a mass about 6 cm in the lower pole of the spleen. Splenectomy was performed by ligating splenic artery and vein after releasing splenic ligaments. The patient was discharged on the 4th postoperative day without any problem. Macroscopically, a mass of 6x6x5 cm in size was detected and a microscopic analysis of this mass revealed plasma cells, leukocytes, eosinophils, erythrocyte cells and fibrosis.

**Conclusion:** Inflammatory pseudotumor is a very rare pathology in the spleen. The etiology has not been elucidated but is generally thought to be benign. They can also be called inflammatory myofibroblastic tumors. It usually has no specific symptoms. They may present with fever, sweating and weight loss in the case of lymph node involvement. It is known that they rarely cause anemia or thrombocytosis picture. It is difficult to differentiate from other spleen masses in imaging methods. Although USG and CT are successful in seeing spleen masses, they cannot give specific findings. Magnetic resonance imaging (MRI) may provide more detailed information about the lesion; but it is not useful for diagnosis. Despite the imaging methods, definitive diagnosis can be made by detailed pathological examination after splenectomy. Pathological diagnosis may be difficult since hematopoietic malignancies can be confused with malignancies such as leiomyosarcoma and inflammatory malignant fibrous histiocytoma. Plasma cells, leukocytes, eosinophils, erythrocyte cells and fibrosis can be seen in microscopy as in our case. No treatment is recommended in addition to splenectomy. However, the etiology is not known and follow-up of patients is recommended. No recurrence has been reported in the pseudotumors in the spleen and they are known to have good prognosis. Splenic inflammatory pseudotumors should be kept in mind even though it is a rare condition in the differential diagnosis of spleen masses. The diagnosis is made by pathological examination only after splenectomy. Although there are benign masses, the etiology is not clearly known and follow-up is recommended for recurrence.

**Keywords:** Spleen, mass, inflammatory pseudotumor

## PP-0542 [General Surgery Diseases]

# Giant Mesenteric Fibromatosis: A Case Report

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**Introduction:** Mesenteric fibromatosis can be described as a rare condition. There are superficial and deep type. Superficial fibromatosis is seen in face, neck, hand, foot etc. while deep fibromatosis is seen in the mediastinum, retroperitoneum, abdominal cavity, abdominal wall and mesentery.

**Case:** A 56-year-old female patient was admitted to our outpatient clinic with a palpable swelling in her abdomen. It was learned that the swelling had been palpable for 4-5 months, it did not cause any pain, and was thought to have grown during this period.

The patient had no complaints such as abdominal pain, nausea, vomiting and constipation. A hard, smooth surface mass was palpated at the level of umbilicus in the abdominal examination. No features were detected in the blood values studied. She underwent abdominal computed tomography (CT). In CT, a mass of 15x15 cm was reported not causing invasion to the surrounding tissues and it was stated that it may be originated from small intestine. Operation was recommended to the patient. A hard, encapsulated mass with a size of 15x15 cm, adhered to middle ileal loops and small intestine meso was detected in the laparotomy performed with midline incision. The mass was excised with the small intestine segment adhering to the mass, considering that it may be a small intestine-originated lesion. The patient did not have any complaints during the postoperative period. Oral intake was started in the postoperative 4th day and the patient was discharged on the 6th day. The pathology result was reported as 17x16x9 cm deep-type fibromatosis. There were no negative state in the outpatient follow-up of the patient.

**Conclusion:** Mesenteric fibromatosis is a rare, benign tumor that progresses with proliferation of fibrosis tissue. Although it is benign, it exhibits local aggressive properties; recurrences may occur. It is commonly known as the disease of the 30s and is seen equally in both genders. Palpable swelling, nonspecific abdominal pain, compression related nausea, vomiting and constipation may be the symptoms. It is asymptomatic and may be seen incidentally in other imagings. Its etiology is not clearly known. It is reported that trauma and the use of estrogen may trigger this condition. Fibromatosis is common in Gardner syndrome. Abdominal ultrasonography (USG), CT and magnetic resonance imaging (MRI) are usually helpful in the diagnosis. Gastroscopy and colonoscopy should be performed in patients who exhibit symptoms such as nausea, vomiting or constipation. Although the mass can be seen in the imaging, definitive diagnosis can be made only after the pathological examinations after excision. Aggressive excision should be preferred because of the high risk of recurrence. In cases where necessary, resection of the adjacent organs should not be avoided as applied in our case. Radiotherapy may be useful in relapse or inoperability. There are studies reporting that adjuvant radiotherapy reduces the risk of recurrence significantly. As a result, although having benign character fibromatosis is a rare mass which may have recurrence but has a significant benefit from aggressive surgery.

**Keywords:** Abdominal mass, mesenteric mass, fibromatosis

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## PP-0543 [General Surgery Diseases]

# Fournier Gangrene Developing from Horseshoe Perianal Fistula

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Fournier Gangrene is a genitourinary emergency having a course of necrotizing infection of perineum and genital organs. Infection is caused by urogenital, colorectal and dermatological flora strains. The most commonly isolated bacteria are E.coli (43-80%), Bacteroides, Klebsiella, Streptococci, Staphylococci and Proteus. Several microorganisms can be isolated in the wound culture in some of the patients. Mortality is between 20-40% and it is 10 times more common in males than females. The major risk factors for Fournier's Gangrene are; D.M (most commonly comorbid with 12-70%) impaired immune system, chronic liver and kidney failure, alcoholism, AIDS, malnutrition, hypertension, obesity, smoking and low socioeconomical status. The most common focus of the infection is the gastrointestinal system (30-50%), the genitourinary system (20-40%) and skin injuries (20%). Aggressive resuscitation, broad-spectrum antibiotics and early surgical debridement are performed in the treatment. All necrotic tissues should be removed and the procedure should be repeated several times if necessary. Colostomy may be opened in anorectal area and sphincter involvement or to reduce contamination if there is fecal contamination. Here, we present a case of Fournier gangrene which developed on the basis of horseshoe fistula. A 37-year-old male patient was admitted to the emergency department with the complaint of pain in the anus in anal verge. In the examination, an abscess was detected at 10 o'clock position in the knee elbow position. Following the necessary preparations, the abscess was drained from the intersphincteric area with a 1 cm incision at 10 o'clock position under spinal anesthesia at jack knife position. Pain and fever complaints of the patient did not regress in the operation area on the 1st postoperative day. It was seen that the hyperemia of the perinal region was progressing towards both gluteal regions, the scrotum and the left inguinal region. In computed pelvic tomography, abscess formation was observed behind rectum in front of coccyx extending to the left perirectal area and the patient was re-operated and then all necrosis tissues were debrided till the live tissue by progressing to the left perianal region, perineum and scrotum and I to the left gluteal region in the lateral. VAC (Vacuum Assisted Closure) treatment was performed during several debridement sessions. 4x500 mg imipenem was started because of piperacillin resistant reproduction in wound culture. Primary repair was performed on the open wound completely free of necrotic and gangrenous tissues on the 11th postoperative day. Modified hanley procedure was applied to the horseshoe fistula and the patient was discharged with healing at the end of 21st day. Posterior midline seton of the patient, whose lateral stones were removed in 2 months follow-up period, was converted to elastic tight seton. The patient is still under follow-up and has no complaints.

**Keywords:** Horseshoe, fistula, fournier gangrene

## PP-0544 [General Surgery Diseases]

## A Rare Pathology in a Patient Operated with the Pre-Diagnosis of Mesenteric Cyst: Gossypiboma

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**Introduction:** The lesions that are forgotten in the surgical operations and which develop due to the non-absorbable materials, with the image of mass are called gossypiboma. In this study, it was aimed to present a case of gossypiboma presenting with abdominal pain and considered as hemorrhagic mesenteric cyst as a result of imaging.

**Case:** A 54-year-old female patient was admitted to our outpatient clinic with complaints of abdominal pain for 2-3 months. The patient's pain was not very severe and she had no complaints other than pain. It was learned from her history that she was under follow-up due to thyroid nodule, and she underwent open cholecystectomy due to gallbladder stone 6 months ago and she had no history of drug use. The patient's vitals were stable. No abnormality could be detected in the physical examination. Laboratory values were within normal limits. Abdominal ultrasonography (USG) was performed and a cyst was reported to extend to the pelvis in USG. Abdominal computed tomography (CT) was performed in the patient and a well circumscribed cystic lesion 156x92x75 mm in size, on the right of the midline, extending to the pelvis, with a thin wall and hyperdense areas thought to belong to the hemorrhagic mesenteric cyst in the foreground was reported. Operation was recommended to the patient. A laparotomy with a midline incision revealed a cystic flat contoured mass extending from below the liver to the pelvis. When the purulent content was seen in the puncture performed in the cyst, precaution with 20% NaCl impregnated compressions were taken for the possible cyst hydatid and the cyst wall was opened and the purulent material was aspirated. A mass formation consisting of several sponges considered to be forgotten in the old operation was seen and after the sponges were taken out, the abdomen was washed and the operation was terminated by inserting a drain. There was no problem in the postoperative period and oral intake of the patient was opened on the 2nd day and she was discharged on the 4th day.

**Conclusion:** Gossypiboma is a condition usually encountered after sponge or buffer-like materials are forgotten inside. It can cause many problems of medical and legal problems. As patients with no symptoms may be encountered, there may be patients presenting with symptoms such as nonspecific abdominal pain, fever, nausea and vomiting in the early or late period. While some of the patients had encapsulation and granulation as in the patient presented in the study, abscess formation may be encountered in other patients. Imaging methods are partially helpful in the diagnosis. Radiological diagnosis can be much more difficult, as is the case in a group presented with encapsulation and granulation; it may be confused with other intraabdominal pathologies. Fistulization of intraabdominal organs, perforation and ileus can be seen in these patients. As a result, gossypiboma is a rare condition, although there are radiologic signs that are helpful in diagnosis, there is no pathognomonic image and may be confused with other abdominal pathologies. It is important to question the history of the operation and to keep in mind the possibility of gossypiboma in patients with a history of operation.

**Keywords:** Abdominal pain, peritoneal cyst, gossypiboma

## PP-0545 [General Surgery Diseases]

## Evaluation of 63 Patients who were Operated with Karydakis Method between 2014 and 2017

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Pilonidal sinus is usually seen in young men. It is frequently observed in the sacrococcygeal region. Many various factors such as male gender, anatomical structure and hair among its causes are mentioned. Surgical treatment is common. Phenol treatment is another option. Surgical treatment is to leave the wound open or close after cyst excision. The closure options include primary closure, midline sliding closure (such as Karydakis and Bascom) and full-thickness skin flap closure (such as Limberg, Z plasty). Sixty three patients were operated with Karydakis method with the diagnosis of pilonidal sinus between 2014 and 2017. Six patients had recurrence (1 female, 5 male). 57 patients were male and 6 were female. The age range was 15-60 years. The duration of surgery was between 23-68 minutes. The mean hospital stay was 2 days. 6 patients underwent hemova drainage. Infection developed in 2 patients. They recovered with antibiotic therapy. Three of 6 recurrent patients (1 female, 2 male) had recurrence again in the first month. These patients were re-operated with open technique. Postoperative follow-up period of all patients was 6 months. No recurrence was observed in other patients during this period. Karydakis method is an ideal method in pilonidal sinus surgery in terms of ease of learning and application. It has a lower recurrence rate than primary closure. The duration of surgery and hospital stay is shorter than the full thickness skin flap. In addition, patient satisfaction is high in terms of postoperative scar.

**Keywords:** Karydakis, recurrence, pilonidal sinus

## PP-0546 [General Surgery Diseases]

# Comparison of Preoperative Anxiety Levels of Emergency and Elective Surgery Patients

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**Objective:** The conditions such as diagnosis, risk of the surgery, prejudices of the patients and preparation for the surgery will affect the preoperative level of anxiety. The aim of this study is to compare the preoperative anxiety levels of general surgery patients who will undergo emergency and elective surgery.

**Material and Methods:** The study was carried out with 100 general surgery patients (50 emergency, 50 elective). The State Anxiety Scale (SAS) and the Surgery Specific Anxiety Scale (SSAS) were applied to both groups to determine the preoperative state of anxiety.

**Results:** SAS and SSAS scores of the patients who would undergo elective surgery were significantly lower than the patients who would undergo emergency operation ( $P < 0.05$ ). None of the patients included in the study were in the "No Anxiety" state. "Severe Anxiety" and "Moderate Anxiety" were found to be significantly higher in the patient group who would undergo emergency surgery ( $p < 0.05$ ). Only "moderate anxiety" was detected in patients who would undergo elective surgery. The difference between anxiety levels was statistically significant ( $p < 0.05$ ).

**Conclusion:** As a result of this study, the anxiety level of the patients to be operated urgently is higher than that of the patients who are planned to be operated electively. It is predicted that the patients' pre-operative anxiety status depends on the preparation process for the operation, and can be significantly reduced with an effective pre-operative training and preparation process.

**Keywords:** State anxiety scale, surgery specific anxiety scale, emergency surgery, elective surgery, anxiety.

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## PP-0547 [General Surgery Diseases]

# A Rare Sarcoma After Radiotherapy

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**Introduction:** The incidence of sarcoma after radiotherapy was reported to be between 0.03% and 0.80%. It is necessary to develop sarcoma within the radiotherapy area, to show that this area is normal before radiotherapy and to develop at the end of a period of at least 3 years in order that sarcoma diagnosis is made after radiotherapy. Almost all of the sarcomas developing after radiotherapy develop in adults and it is seen that it develops more frequently in women. The reason for this may be that radiotherapy is used more frequently in breast and gynecological carcinomas. We report two cases of rare sarcoma following radiotherapy.

**Case-1:** A 60-year-old female patient presented with a palpable mass on the anterior abdominal wall. She had a history of radiotherapy for cervical cancer in her history. Physical examination revealed rigidity in the left lower quadrant of the abdomen. Laboratory examinations and tumor markers were normal. Abdominal MRI revealed a lesion of approximately 8x4.5 cm in the left rectus abdominis muscle in the pelvis. PET/CT showed a mass lesion of approximately 8.5x6 cm in the inferior left rectus abdominis muscle, with a significant increase in size (old size 5x3 cm) compared to the previous PET/CT study. Surgical decision was made in December 2017 and the mass was excised. Pathology of the specimen was spindle cell sarcoma, tumor differentiation was 1, mitosis count was 2 (12 in 10 bba), histological grade was 2 (total score 4) and the largest diameter of the tumor was 15x9 cm.

**Case-2:** A 61-year-old female patient presented with a mass in the sacral region. She had a history of low anterior resection due to rectum cancer and adjuvant CT-RT in 2002. Physical examination revealed a mass of 15x10 cm protruded from the skin in the sacrum. Laboratory tests and tumor markers were normal. Abdominal MRI revealed a mass lesion which extended to the posterior of the sacrum starting from the posteromedial section of the gluteal muscle on the left, with an appearance of infiltration on the skin, 96x45 mm in the widest area and reaching to a size of 85x47 mm in the widest area at the level of left gluteal muscle. PET/CT showed a malignant mass lesion of approximately 102x53x147 mm size which had irregular margin protruded from the skin, extending to gluteus maximus in the posterior in the sacral region. Surgery decision was made in January 2018 and surgery was performed upon obtaining malignant mesenchymal tumor from the high-grade tru-cut biopsy. The specimen pathology resulted in malignant mesenchymal tumor, tumor differentiation score 3, mitosis 18/10BBA score 2, histological grade 3 (total score 6). Both patients were discharged from the hospital with healing and they are under outpatient clinic control.

**Discussion:** The most common soft tissue sarcoma following radiotherapy is malignant fibrous histiocytoma and accounts for 70% of all cases; osteosarcoma, fibrosarcoma, chondrosarcoma and angiosarcoma follow it. Sarcomas developed after radiotherapy are higher grade lesions than sporadic sarcomas and they are more advanced than sporadic cases at the time of diagnosis. Therefore, survival rates are also low. It should not be forgotten that sarcomas may develop rarely after radiotherapy, and surgery is necessary.

**Keywords:** Radiotherapy, sarcoma, malignant mesenchymal tumor

## PP-0548 [General Surgery Diseases]

# Retroperitoneal Paraganglioma Case

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**Introduction:** Paraganglioma is a rare neuroendocrine tumor originating from neural crest cells. It usually grows slowly, and possibility of malignancy exists, although not much. In this study, the case of paraganglioma detected in a patient who was operated due to retroperitoneal mass is presented.

**Case:** A 38-year-old male patient with a complaint of abdominal pain was admitted to the external center. It was learned that the patient had occasional pain for 2-3 months. Abdominal ultrasonography (USG) was performed at the external center and abdominal computed tomography (CT) was performed upon detecting suspicious findings in terms of mass in the left lower quadrant. The patient in whom retroperitoneal mass was detected as a result of CT was referred to our center. The patient had no complaints other than abdominal pain. He had no history of comorbid disease, drug use history or operation. Laboratory values were within normal limits. No physical features were detected in his physical examination. Abdominal computed tomography (CT) performed at the external center was also consulted in our center with the radiology department and a mass with 10x9x7 cm in size, solid and involving cystic areas, in the left retroperitoneal region with heterogeneous enhancement and enlarged vascular structures in the neighborhood were detected. Operation decision was made and a mass was found behind the sigmoid colon meso with the laparotomy with midline incision. Todd fascia was opened and retroperitoneal mass was reached from the lateral side of the colon. The mass was totally excised by sharp dissections and energy devices. The patient without any problem in the postoperative period was discharged on the 6th postoperative day. The pathology result of the mass was reported as paraganglioma. The patient was followed up in outpatient clinics and no problems such as recurrence or metastasis were encountered.

**Conclusion:** Paraganglias are areas adjacent to the nerve plexuses in the body. They consist of specialized neural crest cells. The most common site of these structures is the adrenal medulla and the tumor originating from here are known as pheochromocytoma. The masses of neural crest cells from extraadrenal region are called paraganglioma. They are most commonly seen in the paraaortic region and near the Zuckerkandl organ, and they can be seen everywhere where paraganglial tissues are located. Paraganglioma appears more often in women. It can be sporadic or hereditary and the probability of multicentricity is higher in hereditary patients. Genetic testing is recommended in young patients with paraganglioma making us think multifocality and malignancy. Paragangliomas are usually functional and hypertension attacks, palpitations, headache due to release agents may be the cause of admission of patients. Some cases are completely asymptomatic and may be seen incidentally during other examinations. Blood and urine tests should be performed for the catecholamine levels especially in functional masses in diagnosis. Abdomen CT and magnetic resonance imaging are valuable in the diagnosis. The main treatment of paraganglioma is surgery. It should be noted that in postoperative follow-up, care should be taken especially for relapse and metastasis.

**Keywords:** Mass, retroperitoneal, paraganglioma

## PP-0549 [General Surgery Diseases]

# Uncommon Isolated Metastasis Case of Prostate Cancer: Mass in the Right Adrenal Gland

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**Introduction:** Prostate cancer is the most common type of cancer in men and the second most common cause of cancer-related deaths in America. It has begun to be diagnosed early due to the widespread use of prostate-specific antigen screening and improving radiological imaging examinations and a marked reduction in mortality has started due to prostate cancer after the 1990s. Most of the mass lesions of the adrenal gland are asymptomatic and are usually detected incidentally by routine radio-

logical examinations. It has been reported that adrenal metastasis was observed in 17-20% of prostate cancer cases in whom autopsy was performed.

**Case:** A 84-year-old male patient underwent prostate thick needle biopsy in 2005 due to PSA elevation and was diagnosed with adenocarcinoma (Gleason 4 + 5). He received radiotherapy and antiandrogen therapy after diagnosis. Finally, the PSA value was measured as 2.26 ng/ml (0-4 ng/ml reference values) which was within normal reference values of our hospital on the date of 18.05.2015. PSA value measured on 26.07.2016 was 67.83 ng/ml. Abdominal ultrasound revealed a solid lesion, 50x35 mm in size, with irregular margins in the right adrenal lodge, including calcified areas, became bloodstained with color Doppler ultrasound and whose differentiation with right kidney could not be made (could be due to the right kidney). Abdominal tomography was performed in the patient for evaluation and a soft tissue mass of 96x36x75 mm in size, lobulated contoured, including punctate calcifications, extending to the inferior with anterior perirenal adipose tissue originating from the right adrenal gland medial crus was observed. There was one 18 mm diameter, soft tissue density of the probable lymph node in the left paravertebral area in the retrocrural region, and a few lymph nodes, the largest of which was 11 mm in diameter in paraaortic, retrocaval and paracaval areas. Radical right surrenalectomy was performed in the patient on 23.09.2016 due to right adrenal mass. The pathology result of the patient was reported as metastatic prostate carcinoma. The patient was discharged without any complication on the sixth postoperative day. The postoperative measured PSA value of the patient was 11 ng/ml and antiandrogen medical treatment of the patient continues.

**Conclusion:** Prostate cancer is the second most common malignancy in males in the Western world, and is the second leading cause of cancer-related deaths among men worldwide. Metastatic examination is necessary for a small number of patients with high risk prostate cancer for excluding metastases except bone metastases because few of the patients with advanced disease undergo atypical metastasis. Retroperitoneal involvement is a rare manifestation of prostate cancer, and an increased level of nodal metastases is due to lymphatic spread.

**Keywords:** Prostate cancer, retroperitoneal metastasis, adrenal gland involvement

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## PP-0550 [General Surgery Diseases]

# ASK2ME.ORG: A Review on a Web Based Online Genetic Risk Calculator for Different Cancer Types

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The aim of this study is to present a web-based online calculator for different types of cancer and also a compilation of "www.ask2me.org", which provides physicians with clinical support in the light of current literature. Twenty six or more cancer-associated genes have become to be routinely tested with the introduction of the Next Generation Sequencing method into clinical use. However, it is a fact that many of the physicians have a lack of knowledge and experience about these genes and test results. ASK2ME calculates the possible risks for many types of cancers such as breast cancer, colon cancer and pancreatic cancer following genetic testing and presents available literature information to the physicians in managing the follow-up plans of patients with mutant genes. To ensure this, it is sufficient to specify the patient's demographic characteristics (age and gender), the mutated gene and the type of cancer present in the patient's history, if any, and the type of conservative surgery in the on line calculator. ASK2ME calculates the cancer risks for patients by statistical calculations and comparing them with the non-mutant individuals and visualizes them by means of graphs. It uses reliable sources in the literature about the gene that is present and constantly updated when making these statistics. It specifies the literature information used in the calculations presented and the reliability index of this information as a reference. In addition, ASK2ME provides clinical support to physicians by presenting the relevant sections of international guidelines published by NCCN, ESMO, Graffeo et al. and Tung et al.

**Keywords:** Cancer risk, genetic risk calculation, online calculator

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## PP-0551 [General Surgery Diseases]

# The Effects of Hypothermic (21 ° C) and Isothermic (37 ° C) Peritoneal Lavage on Lung Damage in Intestinal Ischemia and Reperfusion Model



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**Objective:** Injury after intestinal ischemia reperfusion is not mostly confined to the organ that develops ischemia. It can cause damage to many distant organs, especially the lung with the activated inflammatory system and mediator effect. Currently, studies are underway to prevent the etiopathogenesis and prevention of this lung injury. The effects of cytokines and polymorphonuclear leukocytes in the development of lung injury are known in intestinal ischemia reperfusion. However, there are not enough studies investigating the effects of the temperature of the intraabdominal peritoneal lavage on this damage. Therefore, we investigated the effects of hypothermic (21° C) and isothermal (37° C) peritoneal lavage on lung injury by creating an intestinal ischemia reperfusion model.

**Material and Methods:** Seventy two adult male Wistar-Albino type rats were used in our study. Twelve rats were used in the Sham group and 20 rats were used in the other 3 experimental groups. Sham group underwent only laparotomy after anesthesia. Intestinal ischemia and reperfusion were performed for 60 minutes in the control group. Peritoneal lavage was applied to the hypothermic (21° C) and isothermal (37° C) lavage groups for 5 minutes at the beginning of reperfusion in addition to the control group. Lung injury was evaluated histopathologically in lung samples taken after reperfusion. TNF- $\alpha$ , IL-6 and IL-10 values in the blood were measured.

**Conclusion:** Peritoneal lavage applied during intestinal ischemia reperfusion was found to decrease lung injury and decrease IL-6 and TNF- $\alpha$  levels (control, cold and hot peritoneal lavage,  $p=0.011$ ,  $p<0.001$ , respectively) in blood. Histopathologically, hot lavage is more effective than cold lavage ( $p=0.046$ ). As a result, performing peritoneal lavage by heating (isothermic, 37° C) in patients with risk of developing intestinal ischemia reperfusion injury (eg, shock) has been shown to have protective effects on lung injury.

**Keywords:** Intestinal ischemia reperfusion, lung injury, isothermic, hypothermic, peritoneal lavage

## PP-0552 [General Surgery Diseases]

**Extragenital Endometriosis: A Tertiary Hospital Experience with Current Literature****Cengiz Tavusbay<sup>1</sup>, Serkan Karaisli<sup>1</sup>, Emine Gür<sup>1</sup>, Haldun Kar<sup>1</sup>, Erdinç Kamer<sup>1</sup>, Kemal Atahan<sup>1</sup>, Neşe Ekici<sup>2</sup>, Mehmet Hacıyanlı<sup>1</sup>**<sup>1</sup>*Department of General Surgery, İzmir Katip Çelebi University Atatürk Training and Research Hospital, İzmir, Turkey*<sup>2</sup>*Department of Pathology, İzmir Katip Çelebi University, Atatürk Training and Research Hospital, İzmir, Turkey*

Endometriosis is the location of functional endometrial gland and stromal tissue outside the uterus. These foci, which respond to the hormonal stimulation of the ovaries, are most commonly localized in the incision scar and pelvic region, especially after caesarean section, but also in various organs and tissues other than the pelvis (eye, abdominal wall, kidney, gastrointestinal system, central nervous system, bone, etc.). Sometimes secondary changes such as carcinoma development may be seen. The aim of this study was to discuss the clinical and pathological data and therapies applied in patients with extragenital endometriosis in our center which is one of the largest tertiary hospitals in our region between January 2006 and January 2018 in the light of the current literature.

**Keywords:** Extragenital endometriosis, anterior abdominal wall, transparent cell carcinoma

## PP-0553 [General Surgery Diseases]

**Alternative Therapy of Recurrent Pilonidal Sinus Disease: Phenol Sclerotherapy****Gülden Ballı, Melek Bekler Gökova, Atahan Acar, Murat Kemal Atahan, Ercüment Tarcan***Department of General Surgery, İzmir Atatürk Training and Research Hospital, İzmir, Turkey*

**Objective:** Pilonidal sinus disease is often seen in the sacrococcygeal region and discussions about the etiology and optimal management of the disease are still ongoing. Although it was accepted that the first choice treatment was surgery, the elite method could not be decided. In addition to surgical methods such as excision, excision and primary closure, excision and marsupialization, excision and flap methods, conservative methods such as depilation, cavity cauterization and phenol treatment

are also used. In the light of literature, we aimed to evaluate the effectiveness of intracavitary phenol treatment as a less painful, no hospitalization necessitating, providing fast return to work with low complication and recurrence rate, low cost and good aesthetic results.

**Material and Methods:** For this purpose, 43 patients, who were treated due to recurrence, among 255 patients who was admitted to the outpatient clinic with the complaint of pilonidal sinus and underwent phenol treatment between June 2014 and November 2017 were evaluated retrospectively. Ten patients were female and 33 patients were male. The mean age was 26.2 years. 20.9% of patients had antibiotic use due to a history of previous abscess. The procedure was performed by two surgeons. Following local site cleaning with povidone iodure in the prone position under outpatient conditions; local anesthesia was performed around the sinus orifices with 1 cc lidocaine solution. The cavity was dilated with a mini incision connecting the orifices. Cavity content was mechanically removed from hair, debris and granulation tissues. The pure alcohol solution of phenol as much as cavity volume was injected with a blunt-tipped syringe from enlarged orifice after washing with oxygenated water and 0.9% isotonic NaCl. It was waited for for 5 minutes and was aspirated. The orifice was cauterized with silver nitrate and covered with dressing. The procedure was repeated if the epithelization was not completed on the 10th day and 6th week follow-up. The mean number of sessions was 2.4 and the mean follow-up was 15.7 months. Complete epithelization in the patients who were called for monthly controls was accepted as cure. During the follow-up period, recurrence was detected in one patient in 6 months and phenol was performed.

**Conclusion:** It is concluded that phenol treatment can be an alternative method to surgical treatment because of its high treatment success, low cost, easy application, low morbidity and since it provides early return to work.

**Keywords:** Phenol, pilonidal sinus, sclerotherapy

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## PP-0555 [General Surgery Diseases]

# Isolated Splenic Metastasis due to Ovarian Carcinoma

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**Introduction:** Metastatic masses in the spleen are rare lesions. They are usually seen in advanced stage disease. In this study, a case of splenic metastasis occurring after 8 years in the patient who underwent curative surgical procedure due to ovarian cancer and being followed without any problem will be presented.

**Case:** A 78-year-old female patient who was operated for ovarian cancer 8 years ago was admitted to medical oncology outpatient clinic with complaints of fatigue. It was learned that she had been suffering from fatigue for 2-3 months and did not affect her daily life very much. It was also learned that the patient had no additional problems other than diabetes, was treated with oncology department after transabdominal hysterectomy and bilateral salpingo-oophorectomy (TAH + BSO) operation because of ovarian cancer and she was under disease-free follow-up. Routine blood analyses and tumor markers because of ovarian cancer were studied. The patient had no problem in the routine laboratory values and the Ca-125 level was above the normal with 77.9 U/mL. Abdominal computed tomography (CT) was performed for possible metastasis of the patient, and a mass of 36x28 mm in size in the middle part of the spleen that was understood to appear newly when compared with the CT 3 years ago and considered to be possibly metastatic was reported when compared with CT. The patient was evaluated by oncology department and an operation was recommended. The patient was operated after preoperative anesthesia preparation and pneumococcal vaccination for splenectomy. The abdomen was entered by supraumbilical median incision and the lesion was thought to be metastatic in the spleen was seen. Spleen ligaments were excised and the spleen was released and splenic artery and vein were ligated in the hilus region and splenectomy was performed. The patient was discharged on the fifth postoperative day without any problems other than atelectasis. The pathology result was reported as 4x3x3,5 cm carcinoma metastasis. The patient was evaluated with postoperative pathology by medical oncology and no adjuvant therapy was considered due to advanced age. Outpatient clinic controls continue without any problems

**Conclusion:** Although spleen metastases in ovarian tumors can be seen in advanced stage disease, isolated spleen metastasis is a very rare condition. There is no specific symptom. It can be detected during routine controls or in patients presenting with complaints such as fatigue and nonspecific abdominal pain. Generally, Ca-125 level is expected to increase. CT is successful in demonstrating the lesion in the spleen, but a definitive diagnosis requires pathological examination. Needle biopsies are not recommended for pathological examination and pathological diagnosis option is more preferred after splenectomy. Splenectomy applied to isolated spleen metastases without any other organ invasion is reported to prolong survival. In appropriate patients, adjuvant chemotherapy after surgery may further improve survival in the patient. As a result, splenectomy is the most appropriate option in isolated splenic metastases detected in patients who were operated for ovarian cancer. It has a positive effect on survival. It should be noted that adjuvant chemotherapy added to splenectomy may further increase survival.

**Keywords:** Ovarian cancer, metastasis, spleen, mass

## PP-0556 [General Surgery Diseases]

# The Possible Predictive Differences of Acute Appendicitis Caused by *Enterobius vermicularis* in Terms of Blood Count Parameters Compared to Other Causes

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**Introduction:** Appendectomy is one of the most common emergency surgical procedures. It is the most common surgical operation in the world and in our country as a part of emergency abdominal surgery. Addiss et al. in their study, have found that the risk of appendicitis throughout the life was around 8.6%. In another study, almost 7% of all people were reported having undergone appendectomy during their lifetime. Acute appendicitis, which is defined as inflammation of the appendix tissue, is more common in the 2nd and 3rd decades. The histopathological examinations of the patients who underwent appendectomy were reported to be frequently caused by acute inflammation, fibrous tissue, neoplasms, neuroendocrine tumors, tuberculosis, diverticulosis, granulomatous inflammation, adenomas, actinomyces, endometriosis and *Enterobius vermicularis*. Closure of the appendiceal lumen due to the cause of the event and the inflammation surrounding the tissue is the reason of reflection to the clinic. The most common symptoms are abdominal pain (78%) and nausea-vomiting (26%). (6) The aim of this study was to determine whether pre-operative whole blood count has a possible predictive effect between patients undergoing appendectomy and the cause is reported as *Enterobius vermicularis* and other group patients.

**Material and Methods:** The study was designed and applied in Eskisehir Osmangazi University Department of General Surgery. Approximately 250 appendectomy operations are performed annually in our center due to acute appendicitis. The operations can be performed open and laparoscopic. In this study, 17 patients who underwent appendectomy between the years of 2012-2017 and enterobius vermicularis was detected as a cause in the final pathology report and 21 patients whose pathologic examination was reported as mainly acute inflammation were compared. The complete blood count values of the patients at the time of admission were used as the comparison parameter. Statistical analyzes were performed using IBM SPSS, version 21. Enterobius-caused specimens and specimens with the causes other than *Enterobius vermicularis* were evaluated by T-test according to their normal distribution and by Mann-Whitney U test because displaying differences.

**Conclusion:** According to the distribution test since the variables of "Hb, Htc, erythrocyte and MPV" display normal distribution and the T test was used to compare these variables with *E. vermicularis* and inflammation patients. According to the T test results, no significant difference was found between the groups for Hb, Htc, erythrocyte and MPV variables. The Mann-Whitney U test among nonparametric tests was used because other variables did not show normal distribution. In the examination, a significant difference was found in absolute neutrophil and Plt which are among these variables. As a result; absolute monocyte and plt (thrombocyte) values except for the usual parameters frequently used in patients with abdominal pain and suspected acute appendicitis should be considered as predictive for enterobius vermicularis infection and it should be examined whether the event can be suppressed with anthelmintic medical treatment or not in the questioning taking into account a good anamnesis and socioeconomic status. With this study in which the number of support and literature is limited, continuation and support studies should be designed.

**Keywords:** Appendicitis, enterobius, surgery

## PP-0557 [General Surgery Diseases]

# Benefits of Vacuum Assisted Closure Therapy in Fournier Gangrene

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**Introduction:** Necrotizing fasciitis; is a bacterial infection of the fascia that can be mortal in a very short time. It is also referred to as Fournier's gangrene if it concerns genital and perineal regions. Although it is stated in the original definition of Fournier's gangrene that it develops without an underlying cause, it has now been found that diseases such as diabetes mellitus (DM), alcohol use and HIV are the causes of the disease [2]. In this article, we will discuss 3 different cases we treated by antibiotherapy, debridement, vacuum assisted wound closure (VAC) systems and HBO treatment.

**Case 1:** A 52-year-old female patient was admitted to our hospital with swelling in her genital region which had been present for 4 days. The patient was evaluated with multidisciplinary approach and wide debridement was performed on the same day and

her wound was closed with VAC treatment. She was under follow-up in intensive care unit (ICU) for 2 days due to hypertension (HT), Graves and peripheral arterial diseases and sepsis. The patient required 7 times debridement and VAC including iliofemoral bypass graft.

**Case 2:** A fifty-eight-year-old male patient was admitted to our clinic because his complaints did not regress after perianal abscess drainage performed 4 days ago. Insulin treatment was initiated in the patient with swelling, redness and edema extending from perineum on the left side to scrotum and groin and who had known DM and the first debridement was performed on the same day. Diverting colostomy was opened in the patient, whose necrosis area extended to the perineal region, in the same session. The patient was followed up for 22 days with VAC treatment and debridement and VAC change was performed 8 times in this process. The patient was not treated with HBO.

**Case 3:** A 50-year-old woman with known DM, hypercholesterolemia, HT, asthma and chronic renal failure (CRF) was consulted to our clinic for a 1-month history of a fistula with discharge on her left groin and was referred with a pre-diagnosis of necrotizing fasciitis. VAC was performed by extensive debridement and HBO treatment was added since it was in the abdominal region.

**Discussion:** In case of delayed diagnosis or treatment, mortality and morbidity are high. Mortality and morbidity are high with surgical debridement alone. For this reason, additional therapies such as HBO and VAC treatment are used. Based on culture reproduction, broad spectrum antibiotics should be started as soon as the patient is diagnosed. Age, diabetes, immunosuppression, other systemic diseases, the disease's being focal or diffuse, and stress conditions can affect the immune system, causing sepsis to become uncontrollable and mortal. HBO therapy and VAC application and diverting ostomy make treatment more effective. Using VAC accelerates angiogenesis by preventing contamination.

**Conclusion:** After debridement, we found that the VAC, which allows sterile closure of the wound, is successful without using HBO alone. Especially after debridement in ganglia of perineum, VAC alone can provide adequate treatment without HBO. VAC and HBO treatment has been shown to reduce mortality and morbidity when used in addition to debridement and antibiotic therapy.

**Keywords:** Fournier gangrene, debridement, necrotizing fasciitis, hyperbaric oxygen, vacuum-assisted closure

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## PP-0558 [General Surgery Diseases]

# Single Center Experience in Splenectomies with Non-Trauma Causes

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**Objective:** The second most frequently injured organ in abdominal trauma is the spleen and trauma is the most common cause of splenectomy. On the other hand, splenectomy is an important treatment option in the presence of hematological disease which is resistant and aggressive to medical treatment. In addition, splenectomy can be performed procedurally in primary diseases of spleen and other malignancy operations. In this study, we aimed to evaluate the indications of splenectomy for non-traumatic reasons in our clinic.

**Material and Methods:** Data of 37 patients who underwent splenectomy for non-trauma reasons between January 2012 and December 2017 were retrospectively analyzed. The indications of age, gender and splenectomy were evaluated.

**Results:** Of the patients, 19 (51.3%) were male and 18 (48.7%) were female. The mean age was 55.1 (18-79). The causes of splenectomy were gastric adenocarcinoma in 13 patients (48.6%), colon carcinoma in 3 patients (8.1%), splenic cyst, splenic abscess, pancreatic neuroendocrine tumor and hemangioma in two patients (5.4%) respectively and follicular hyperplasia, idiopathic thrombocytopenic purpura (ITP), mesothelial cyst, suspected atypical lymphoid, renal carcinoma, urothelial carcinoma, pancreatic mucinous cystadenocarcinoma, esophageal cancer, pancreas mucinous cyst adenoma, pancreatic intrapancreatic mucinous neoplasm (IPMN), renal sarcomatoid carcinoma, non-Hodgkin lymphoma, thrombotic thrombocytopenic purpura (TTP) and spontaneous rupture in 1 patient (2.7%).

**Conclusion:** Although it varies with age in different countries, hematological diseases and infections are among the indications of non-traumatic splenectomy, and other intraabdominal operations are among the most common procedures. It was observed that the rate of splenectomy was very low due to hematological diseases and other primary pathologies of the spleen. On the other hand, it was observed that the number of procedural splenectomies was high due to intraabdominal malignancies. We think that the rate of procedural splenectomy will decrease with both the change of principles of approach to tumor surgery in recent years and increasing frequency of the use of energy devices used in vessel sealing and tissue dissection.

**Keywords:** Splenectomy, hematological diseases, procedural splenectomy

## PP-0559 [General Surgery Diseases]

## A Case of Sarcoidosis Diagnosed after Splenectomy

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**Introduction:** Sarcoidosis is a granulomatous disease affecting many systems. It most commonly involves the lungs. In this report, a case of sarcoidosis diagnosed after splenectomy will be presented.

**Case:** A 35-year-old male patient was admitted to the outpatient clinic of chest diseases with complaints of phlegmy cough for one and a half months. Right chest rhonchus was detected in the thoracic examination of the patient. Thoracic chest computed tomography (CT) performed in the external center showed a bilateral patchy ground-glass appearance. 31% lymphocyte was detected in the lavage performed with bronchoscopy, and biopsies taken were reported as benign. Microbiological tests for tuberculosis were reported as negative. Methylprednisolone treatment was started in the patient with the diagnosis of hypersensitivity pneumonia and improvement in her symptoms was detected.

The patient developed abdominal pain one month later and abdominal CT performed in the emergency service the patient was admitted, revealed multiple hypodense lesions larger than 1 cm in spleen and liver and lymph nodes in the portal hilus. Diagnostic splenectomy was recommended in the patient who was evaluated by the hematology department. The operation was planned laparoscopically. The operation was started with one 12mm, one 10 mm and two 5mm ports inserted into the midclavicular line on left subcostal line, umbilicus neighborhood from anterior and posterior axillary lines in the right lateral decubitus position. Spleen was completely separated with laparoscopic vascular stapler placed in the splenic hilus after the spleen was separated from ligaments and splenectomy was performed. It was removed out of the abdomen in large pieces with the aid of specimen bag. The patient without any problem in the postoperative period was discharged on the 3rd day. Pathology result revealed granulomatous inflammation without caseification consistent with sarcoidosis. The patient was followed up by chest diseases in the postoperative period, and he was treated with methylprednisolone for 1 year with the diagnosis of sarcoidosis with liver, lung and spleen involvement. Then, the patient was discontinued with methylprednisolone his outpatient clinic follow-ups continue.

**Conclusion:** Sarcoidosis is known as a granulomatous disease of unknown cause. It appears more in young ages and women. It can involve many systems and is characterized by the formation of granulomas without caseification in the systems it involves. Although the most common involvement is seen in lungs and lymph nodes it can be seen in the other organs as well. Although most of the patients are asymptomatic, the most common symptom is cough and shortness of breath in patients who are symptomatic. Spontaneous remission may occur in some patients. Although imaging techniques are valuable when combined with symptoms and physical examination findings, diagnosis is usually made by biopsy. It can be encountered with multiple nodular lesions, hepatomegaly, splenomegaly and lymphadenopathy in the liver and spleen in abdominal CT. The diagnosis of sarcoidosis should always be kept in mind in case the described rare lesions occur or respiratory symptoms accompany these lesions.

**Keywords:** Splenic mass, sarcoidosis, granulomatosis lesion, non-caseating

## PP-0560 [General Surgery Diseases]

## Splenectomy Cases Applied due to Cyst Hydatid

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**Objective:** The factor of cyst hydatid is echinococcus granulosus and is still a serious problem in our country. Although cyst hydatid is most commonly seen in liver and lungs, splenic cyst hydatid cases are encountered considerably. The aim of this study was to review the characteristics of splenic cyst hydatid cases who were operated in our clinic.

**Material and Methods:** Six patients who underwent splenic hydatid cyst between 2011 and 2017 were included in the study.

**Results:** Four patients were male and 2 patients were female. The mean age was 49.8 (31-71). The most common complaint of the patients was abdominal pain. Preoperative abdominal computed tomography (CT) was present in all of the patients and hydatid cyst was reported. Only one patient had splenomegaly, while the other patients had normal spleen. Splenectomy was performed in all patients. 2 patients had ASA 1, 3 patients had ASA 2 and 1 patient had ASA 3. All patients underwent pneumococcus and influenza vaccines 2 weeks before the operation. One patient underwent laparoscopic surgery and then the patient was operated with open surgery on suspicion of rupture of the cyst. All of the other patients were operated with open method. 2 of the patients underwent both cystotomy + drainage due to liver cyst hydatid and splenectomy due to splenic hydatid cyst at the same session. Splenectomy was performed in 4 patients due to isolated spleen involvement. One of these 4 patients had previously been operated because of liver hydatid cyst. 5 of the patients had a single cyst in the spleen and 1 patient had 3 hydatid cysts in the spleen. Overall, the average size of 8 cysts in 6 patients was 8.9 (2.5-28) cm. None of the patients required intraoperative transfusion. The

mean hospital stay was 8.5 (5-17) days. No complications were encountered except for atelectasis in the postoperative period. Mortality was not seen in any of the patients. All patients were discharged with antiparasitic treatment. During follow-up, one patient who had undergone liver hydatid cyst and had splenectomy due to isolated splenic hydatid cyst was found to have 5 cm recurrent liver hydatid cyst and was treated percutaneously.

**Conclusion:** One of the common causes of splenic cysts is hydatid cyst and should be kept in mind in the differential diagnosis. There are no specific symptoms in splenic hydatid cyst. It can occur incidentally in patients who are followed up due to hydatid cyst in control imagings or some patients may have abdominal pain or pressure symptoms. Splenomegaly can sometimes be seen in physical examination. Serological tests and imaging methods are helpful in the diagnosis. Splenectomy is the most common treatment for splenic hydatid cyst. Although open method is usually preferred, laparoscopy can be performed in selected cases. As a result, hydatid cyst should be kept in mind in the differential diagnosis of splenic cyst and the patients should be carefully questioned in this respect. Splenectomy is the most appropriate treatment.

**Keywords:** Spleen, hydatid cyst, *Echinococcus granulosus*

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## PP-0561 [General Surgery Diseases]

# Non-Foreign Foreign Body Image After Abdominal Surgery: Distal Sternal Cleft: A Case Report

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**Introduction:** Forgetting of the foreign body (sponge, clamp, surgical needle tip) inside the abdomen is a possible complication in all operations. The incidence of forgotten foreign bodies in the abdomen is reported in the literature as approximately one in 1000-1500 intraabdominal operations. Forgotten foreign bodies in abdominal surgery can cause many complications such as ileus, peritonitis, brid or abscess formation and fistulas and consequently death. Congenital chest wall deformities that may have affected the costa, cartilage and sternum in many different ways with or without different anomalies of the musculoskeletal system can be seen. In our study, we aimed to present a case with distal sternal cleft giving an image of foreign body in the physical examination with clinical and radiological findings.

**Case:** A 71-year-old male patient who was operated due to ileus 2 months ago and presented with abdominal pain complaint described pain in the epigastric region. In physical examination a hard, mobile mass was palpated with a body part of 3 cm in the epigastrium and leg parts extending to both sides from the lower part of the body having 5 cm in size. Computed tomography imaging of the abdomen revealed a mass distal sternal cleft.

**Conclusion:** Foreign bodies in the abdomen are frequently seen in emergency surgeries and surgeries with excessive intraabdominal bleeding. The control of the surgical area, surgical instrument and sponge counts at the end of the operation are the most important methods to prevent this situation. Although foreign bodies in the abdomen are rarely seen, symptomatic patients with abdominal surgery history should be considered and should be investigated. Early diagnosis and treatment significantly reduce morbidity and mortality.

**Keywords:** Distal sternal cleft, intra-abdominal foreign body, computed tomography

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## PP-0562 [General Surgery Diseases]

# Tailgut Cyst-Retrorectal Cystic Mass: Case Report

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**Introduction:** Tailgut cysts, known as retrorectal cystic hamartomas, are rare conjunctival lesions that persist in the retrorectal-presacral space and have embryonic hindgut remnants. They are often asymptomatic in middle-aged women. They may cause symptoms such as abdominal pain and constipation. The most important complications are perianal abscess, anorectal fistula and mucinous adenocarcinoma which can develop in the cyst wall. In this study, we aimed to present a rare case with clinical and radiological findings.

**Case:** A 28-year-old female patient presented with a complaint of constipation and described a mass growing fast in the rectal region in the last two months. Physical examination revealed a palpable mass in the perirectal region. There was no abnormality in laboratory tests. Magnetic resonance imaging (MRI) of the pelvis showed an intermediate intense mass lesion with a size of 62x53 mm at the anterior of coccyx extending between rectum and coccyx at T1A sequences and a hyperintense mass lesion at T2A sequences. A retrorectal mass in the presacral area was evaluated as tailgut cyst in the light of clinical and radiological findings. The patient's surgery at the external center was planned.

**Conclusion:** Tailgut cysts are mostly asymptomatic cysts that occur as a result of embryological tailgut regression defects observed frequently in women in the 4th decade with an incidence of 1/40.000-63.000 incidence. Therefore, if it is not found incidentally in rectal or gynecological examination, it can be diagnosed when it reaches to large size or complication develops. Surgical resection should be planned because of complications such as infection and malignant transformation.

**Keywords:** Tailgut cyst, retrorectal cystic hamartoma, perirectal mass

## PP-0563 [General Surgery Diseases]

### Perineal Agressive Angiomyxoma

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Angiomyxoma is a rare benign tumor especially in women of childbearing age, especially in the perineum, pelvis and gluteal region. Herein we report a 39-year-old female patient who was operated with the diagnosis of perineal hemangioma and whose pathological evaluation was reported as angiomyxoma.

**Keywords:** Angiomyxoma, perineum surgery, benign tumor

## PP-0564 [General Surgery Diseases]

### Comparison of Primary Repair and Limberg Flap Methods in Pilonidal Sinus Disease

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**Objective:** Pilonidal sinus disease is a chronic disease with a benign course seen most commonly in the sacrococcygeal region in intergluteal sulcus. The disease, which is usually observed between the ages of 15-25, is approximately 4 times higher in males. Foreign body reaction of hair follicles in the etiology is accused. Many conservative and surgical methods have been defined in the treatment of pilonidal sinus disease and none of these methods could find a place as the ideal treatment method in the literature. In our study, we aimed to compare the results of primary and limberg flap repair after pilonidal sinus excision.

**Material and Methods:** A total of 143 (male/female 98/45) patients who were admitted to Kahta State Hospital General Surgery Department between January and December 2015 and were diagnosed with pilonidal sinus disease and operated were retrospectively screened and included in the study. Recurrent patients were excluded from the study. All patients were operated under standard spinal anesthesia and in prone position. All patients were discharged within 24 hours post-operatively. The patients were evaluated according to the type of surgical procedure applied as Group A (n: 88) (Total Excision + Primary Closure cases) and group B (n: 55) (Total excision + Limberg flap cases). Age, gender, length of hospital stay, recurrence rate and early complication rates of the patients were investigated.

**Results:** A total of 143 cases (male/female 98/45) operated for a 1-year period with the diagnosis of pilonidal sinus have a mean age of 22.1 years and a range of 13-44 years. The mean follow-up period of the cases was 24 months and the recurrence rate was 5.6% (n: 5) in excision and primary closure, and 3.6% in the Limberg flap method (n: 2). Wound infection was the most common complication in the early period and the rates were 17% (n: 15) in excision and primary closure, and 18.1% in the Limberg flap method (n: 10). There was no significant difference between the groups in terms of postoperative hematoma (p>0.05). Flap ischemia was not observed in the patients.

**Conclusion:** Many conservative and surgical methods are used in the treatment of pilonidal sinus and none of these treatment methods can cure completely and prevent recurrence. The surgical method should be determined and applied preoperatively by common decision according to the spread of the disease, the experience of the surgeon and the priorities of the patient.

**Keywords:** Pilonidal sinus, primary repair, limberg flap

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## PP-0565 [General Surgery Diseases]

# Acute Pancreatitis Case with Acute Appendicitis

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**Introduction:** Emergency surgical pathologies are rare and may be associated with each other, and this may lead to underdiagnosis. In this paper, we aimed to present a case of acute biliary pancreatitis and acute appendicitis in which the examination of the patient was evaluated to reach to a correct diagnosis by imaging and investigations.

**Case:** A 20-year-old male patient was admitted to the emergency service with complaints of abdominal pain, high fever, nausea and vomiting. Abdominal examination revealed tenderness in the right upper quadrant and epigastric region and rebound in the right lower quadrant. The analysis of the patient was: Leukocytes: 17,500/uL, CRP: 21.4mg/dl, T/D Bilurubin: 2.7/1.7mg/dl, ALT: 122U/L, AST: 125U/L, AMILAS: 2100U/L, LIPAS: 6400U/L, ALP: 139U/L, GGT: 312U/L. Hepatobiliary ultrasonography showed that the wall thickness of the gallbladder was increased by 6 mm and multiple millimetric calculi were present in the lumen. The choledoch and intrahepatic bile ducts were evaluated in normal size. Acute pancreatitis was considered with the present findings. The patient was asked to perform a full abdominal tomography examination because of a rebound in the right lower quadrant and a possible pancreatic necrosis that can form secondary to pancreatitis. Abdominal tomography showed increased gallbladder wall thickness, edematous appearance secondary to pancreatitis, contaminated mesentery around appendix, appendix diameter increased by 1 cm and was consistent with acute appendicitis. The patient was immediately taken into operation. In the laparoscopy, the findings were consistent with the imaging findings. Simultaneous laparoscopic appendectomy and laparoscopic cholecystectomy were performed.

**Conclusion:** Although rare, two different surgical pathologies can be found together in patients with acute abdomen requiring urgent surgery, however, if the other surgical pathology is not noticed, the treatment of the patient may be delayed. Patients with acute biliary pancreatitis are usually hospitalized and followed up in our clinic and on average cholecystectomy is planned to 4-6 weeks later postoperatively. However, as in the case of this case, we should not focus on a single diagnosis and should evaluate the examination findings of the patient and although rare the clinic of acute appendicitis with acute pancreatitis should be kept in mind.

**Keywords:** Acute, appendicitis, simultaneous, laparoscopic, pancreatitis

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## PP-0566 [General Surgery Diseases]

# Nuck Canal Cyst: A Case Report

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**Introduction:** Nuck canal cyst is a cystic pathology of inguinal region which is formed as a result of closure defect of processus vaginalis in girls. Nuck canal cysts present with of ten painless, hard mass that cannot be reduced into the abdomen. Therefore, it is frequently confused with sliding or etranguated hernia. Lipoma, lymphadenopathy and abscess formation should be considered in differential diagnosis. Treatment of nuck canal cyst is open surgical resection of the cyst.

**Case:** A 30-year-old female patient presented to our outpatient clinic with complaints of mass in the right groin. A painless, mobile mass in the right inguinal canal, which cannot be reduced to the abdomen was detected. Ultrasonography (US) was planned for the patient preoperatively. A 3 × 2 cm cystic mass whose connection with the inguinal canal could not be clearly selected was reported in the ultrasonography. The patient was operated and the cystic lesion was resected. It was defined as a cystic cyst with mesothelial character, furnished with single-layer cuboidal cells filled with light colored fluid and smooth muscle tissues on the walls in the histopathological examination. There was no problem in the postoperative period and the patient was discharged with healing.

**Conclusion:** Although nuck canal cyst is not rarely seen in practice but it is not seen at the same frequency in the literature. Knowing the details of the subject will be more useful in terms of determining the real frequency and in terms of diagnostic approach.

**Keywords:** Nuck canal cyst, processus vaginalis, inguinal canal



## PP-0567 [General Surgery Diseases]

# Simultaneous Pectoral Intramuscular and Cyst Hydatid Disease of the Lung, Case Report

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**Introduction:** Hydatid disease is a helminthic zoonosis, which is often caused by *Echinococcus granulosus*. The incidence of hydatid disease in our country is reported between 1/20,000 and 1/50,000. The first station of the larvae taken from the mouth in the body through the portal system is the liver. For this reason, the most common organ of the liver is the liver (75%), followed by the lung. Mediastinum, pleura, pericardium and chest wall can be counted among intrathoracic extrapulmonary involvement locations. In our case, we touched on our patient who was admitted to our outpatient clinic with a complaint of a mass in the breast and concurrently detected hydatid cyst in the breast and lung.

**Case:** A 27-year-old female patient with no known comorbid disease was admitted to our outpatient clinic due to a mass in the left breast. A heterogeneous, hypoechogenic, lobulated contoured solid lesion with irregular margins and a lobulated contour of 22\*17.5 mm in the pectoralis major muscle in the left breast tail was observed. Thin anecogenous collections and echogenicity increase were observed between the muscle fibers around the lesion area. The chitin membrane of the hydatid cyst was observed in the tru-cut biopsy taken from this area. Thoracic and abdominal computerized tomography were performed in order to investigate a similar lesion in a possible localization of the patient considered to have cyst hydatid disease. Thorax computed tomography revealed a 23 mm diameter regular contoured, hypodense nodule with a solid appearance in the posterobasal segment of the right lung in the lower lobe. Follow-up decision was taken for the current lesion in the breast. The patient referred to chest surgery was operated considering hydatid cyst of the lung. The mass was excised by mini-thoracotomy + enucleation. The patient, who was followed-up with thoracic drains, was discharged due to expanded lung by withdrawing the drains without any complication. His postoperative pathology was consistent with hydatid cyst. He had no follow-up in the current process. No recurrence was observed in the patient whose follow-up continued with albendazole treatment.

**Conclusion:** The treatment of hydatid cyst is surgery. When the disease is detected, treatment should be done without delay and the complication should be avoided. No time should be wasted especially in giant cysts with a risk of rupture and in cysts located in vital organs such as the central nervous system and mediastinum. It should be kept in mind that hydatid cyst operations in such localizations may lead to the spread of small daughter cysts as a result of iatrogenic rupture due to careless exploration, thus leading to recurrence. For this reason, as in our case, hydatid cysts should be enucleated as much as possible without rupture and the cavity area of the cyst should be irrigated with fluids with serum sale and prophylaxis should be provided with benzimidazoles.

**Keywords:** Cyst, hydatid, lung, pectoral

## PP-0568 [General Surgery Diseases]

# Malignant Fibrous Histiocytoma Involving the Abdominal Wall

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**Introduction:** Malignant fibrous histiocytoma (MFH) was first defined in 1963 as a sarcoma. In this article, a case of MFH detected in a patient who was operated for gallbladder carcinoma previously will be presented.

**Case:** A 72-year-old female patient who had undergone enlarged cholecystectomy and liver segment 5 resection due to gallbladder cancer 5 months ago was admitted to the general surgery outpatient clinic with a palpable mass in the right lower quadrant. Physical examination of the patient revealed a mass of approximately 10 cm starting from the skin which was bleeding and fragile. It was learned that the mass formed rapidly in the last few months. Her laboratory values were within normal limits. Abdominal computed tomography (CT) revealed a 230x110 mm cystic mass extending from the pelvic region to the pancreas. In addition, a mass lesion with 109.5-mm-size having solid contrast enhancement with mural component was detected in the right side of the abdomen and under skin. Serum and cytology were reported as benign in the sampling of the cystic mass in the abdomen. So a catheter was placed by interventional radiology and the cystic mass in the

abdomen was evacuated. Then surgery was planned for the mass in the abdominal wall. The mass in the right lower quadrant abdominal wall was excised down to the fascia; and it was seen that it was hemorrhagic and fragile. The patient was discharged on the third postoperative day. The pathology result was reported as pleomorphic type MFH. Despite surgical excision, the patient's tumor recurred rapidly and was operated 2 more times within 8 months. The patient died in about 1 year due to recurrence and metastasis.

**Conclusion:** MFH is a tumor originating from fibroblasts and histiocytes and is rare. It is reported that it is mostly seen in men of advanced age. Approximately half of the cases are lower extremity originated. Upper extremity, retroperitoneum, trunk and abdominal cavity are the other locations it is commonly seen. The etiology is not clearly known, but it is reported that it may be associated with trauma, surgical incisions and radiation. It may display very different symptoms according to the location. Although imaging methods are helpful in diagnosis, definitive diagnosis can be made pathologically. It is known to have 5 types as pleomorphic, myxoid, giant cell, inflammatory and angiomatoid. The one with the worst prognosis, with the fastest growth potential and the most common one is the pleomorphic type. MFH is a malignancy having a course of recurrence and metastases. Recurrence and metastasis are more common in larger ones. Surgery is the most preferred option in the treatment according to the stage of the disease. Although radiotherapy and chemotherapy are the other treatment methods, the response of the tumor is usually not good. Recurrence and metastasis screening should be performed with frequent imaging methods according to tumor location.

**Keywords:** Malignant fibrous histiocytoma, abdominal mass, sarcoma, pleomorphic

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## PP-0569 [General Surgery Diseases]

# A Rare Case: Bilateral Elastofibroma Dorsi

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**Introduction:** Elastofibroma dorsi was first defined as a reactionary condition with collagen degeneration and excessive elastin production caused by friction of the scapula to the chest wall. Elastofibroma dorsi is a rare, benign soft tissue tumor growing slowly. It is usually located in the inferomedial of the scapula and serratus anterior muscle. It is more common in advanced ages and women. It is unilateral in 90% of the patients. Although its etiopathogenesis is not known, it is thought that it may be a reactive lesion that develops as a result of rubbing of the lower end of the scapula to the chest wall after repeated microtraumas in the subscapular region. Elastofibroma dorsi may be clinically asymptomatic as it may present with a subscapular mass that typically causes long-term sensation of scapular snapping, discomfort, swelling and sometimes pain. Magnetic resonance imaging is the most reliable and non-invasive technique that can show the characteristic fibrous and fat component of the mass. We aimed to present a patient with bilateral elastofibroma dorsi since it is a rare chest wall tumor and can be easily overlooked in physical examination.

**Case:** A 67-year-old female patient was admitted to our general surgery outpatient clinic with complaints of pain and swelling under both scapula. Physical examination revealed an infrascapular, painless, mobile, semi-rigid, mass when shoulder joint was in flexion and the arm was in abduction. The patient underwent ultrasonography and a tumoral lesion under the latissimus dorsi muscle with the size 9x7x5cm on the left and 5x3x3cm on the right in favor of soft tissue was detected.

In the magnetic resonance imaging of the patient, a 9x8x6 cm (on the left) and a 5x4x3 cm (on the right) fusiform soft tissue lesions between the thoracoposterolateral wall and scapula body in the inferior area of the scapula, having features similar to muscle tissue in T1 and T2 AG and having no capsule formation and sharp margins were recorded.

The patient underwent a left infrascapular lesion total excision in June 2017 and right infrascapular lesion excision was performed in January 2018. The drain of the patient was withdrawn in the postoperative 2nd day and the patient was discharged with healing. The pathological examination of the masses revealed elastofibroma. During the follow-up period, the patient's pain regressed and no additional complication developed.

**Conclusion:** Elastofibroma dorsi is a rare chest wall tumor and can be easily overlooked in physical examination so it should be considered in the differential diagnosis, especially if trauma is defined in patients with long back pain. It should first be investigated radiologically and it should be kept in mind that it may be bilateral. Unnecessary invasive procedure should be avoided according to the patient's condition. In the light of the literature, although the recommended treatment of the elastofibroma dorsi, which is a benign soft tissue tumor, in symptomatic and large lesions is total surgical excision, we are of the opinion that one should not be aggressive in local recurrences and small lesions and follow-up may be sufficient.

**Keywords:** Elasta fibroma, mass, soft tissue

## PP-0570 [General Surgery Diseases]

**A Hard Mass on the Shoulder: Tumor Calcinosis****Altan Aydın, Şaban Uysal***Clinic of General Surgery, State Hospital, Trabzon, Turkey*

Tumor calcinosis is mostly seen in children and young adults; and characterized by swellings located often close to large joints such as the hips, shoulders and elbows. Most of them have multiple localization and some of the cases show familial transition. It is rarely seen in advanced ages. There are mainly primary and secondary forms. There are normophosphatemic and hyperphosphatemic subtypes in its primary form, but both types have normal blood calcium levels. Various diseases such as hyperparathyroidism secondary to chronic renal failure, vitamin D hypervitaminosis and milk alkaline syndrome play a role in the secondary form of the disease. Its microscopic appearance varies according to the active (cellular activity in the foreground) and inactive (calcification in the foreground) period. Phosphorus metabolism disturbance, recurrent minor traumas and the presence of an underlying soft tissue disease can be considered as predisposing factors. Total excision of the mass and sometimes phosphorous binding preparations are used in the treatment. Our case in our case presentation was a 61-year-old female patient with no history of comorbid disease. The patient was admitted to our clinic with the complaint of swelling on the right shoulder for the last 1 year which caused pain from time to time. She had a history of trauma of her shoulder site in the past 2 years. Physical examination revealed a hard mass of approximately 3 cm. The graphy performed since the mass was calcified a calcified mass shade was seen in the shoulder region. The superficial ultrasonography of the patient was interpreted as "mass under the skin, approximately 32x10 mm in size, hypoechoic areas were observed in the central and hyperechoic areas were observed in the periphery". The mass was totally removed in the treatment. The pathology result was obtained as "tumoral calcinosis". The calcium and phosphorus levels of the patient were seen as normal. The patient was consulted to the relevant departments for other possible secondary causes, but no comorbid disease was detected. There was no evidence of a positive family history in the questioning. The trauma history of the shoulder region two years ago was considered as a predisposing factor and the patient was informed about the disease.

**Keywords:** Calcification, tumor calcinosis, soft tissue tumor

## PP-0571 [General Surgery Diseases]

**Reliability of Chemotherapy Port Insertion without Fluoroscopy****Mürşit Dincer, Ahmet Kocakuşak, Gamze Çıtlak, Adnan Hut, Ümit Gür, Akın Ünal, Yusuf Emre Altundal***Department of General Surgery, Haseki Training and Research Hospital, İstanbul, Turkey*

**Objective:** Central venous port is used in patients requiring long-term chemotherapy infusion and having vascular access problem. In this study, we compared the results and complications of central venous port procedures using two different techniques.

**Material and Methods:** 118 patients in whom central venous port procedure was applied to the subclavian vein with two different techniques were analyzed retrospectively. Group 1 consisted of cases undergoing fluoroscopic procedure and Group 2 consisted of cases in whom port was inserted without using fluoroscopy. All procedures were performed under sedation and local anesthesia. All the ports were placed on the fascia of the pectoral muscle in the anterior chest wall and complications were evaluated.

**Results:** A total of 118 ports were performed. Eight complications were observed in these patients. Five patients had pneumothorax, two cases had wound infection and 1 patient had catheter breakage. Statistically no significant difference was found between the two groups in terms of complications ( $p>0.05$ ).

**Conclusion:** Central venous ports increase the quality of life of oncologic patients during chemotherapy. Pneumothorax, wound site infection and catheter occlusion are the most common complications of central venous ports. The use of fluoroscopy in critically ill patients may help in reducing these complications. However, the use of these techniques under fluoroscopy may not always be possible, it may increase costs and require experience. There is also a risk of exposure to radiation when using fluoroscopy. According to the results of this study, the use of fluoroscopy did not change the results and superiority of it could not be shown compared to the other group. Although insertion of a central venous port under fluoroscopy is advantageous in terms of operative guidance, this procedure can be performed in experienced hands with low complication rates without using fluoroscopy.

**Keywords:** Fluoroscopy, complication, central venous port

## PP-0573 [General Surgery Diseases]

# Malherbe Tumor: A Case of Pilomatrixoma in the Trunk

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**Introduction:** Pilomatrixoma or Malherbe tumor is a benign, calcified adnexal tumor originating from the matrix of the hair follicle. It can be confused clinically with various benign and malignant skin lesions. Recurrence after tumor removal is rare. In this presentation a case of pilomatrixoma seen in a patient with a history of breast cancer in an area near the mastectomy lodge and not showing typical clinical features was described.

**Case:** A 53-year-old female patient presented with a complaint of a mass in the left infraclavicular region for about 8 months. The patient had a right mastectomy + right axillary dissection + left SLNB story in 1999 and left breast cancer in 2004. The patient had undergone reconstruction with a muscle flap in the right breast. The prosthesis was removed after reconstruction with a prosthesis. There is a 10 cm incision scar attached to the back wall in this area. Physical examination revealed a 5 cm caudal, midclavicular, and 2 cm stiff, mobile mass that was adhered to the skin. No other mass or lymphadenopathy was detected in the mastectomy or axilla. Ultrasonography report of the patient, whose oncological follow-ups were made at the external center, in whom no finding in favor of recurrence and metastasis was detected was obtained as heterogeneous 12x7.5mm nodular lesion field localized in subcutaneous adipose tissue with hypoechogenic internal structure and the RDUS examination displayed mild vascular coding. Wide excision was performed with adherent skin tissue because of her breast cancer history and close proximity to the mastectomy lodge. Routine oncological follow-up was recommended to the patient whose histopathological examination was obtained as a 1.5x1x1 cm fragile, rigid nodular lesion (pilomatrixoma).

**Conclusion:** Pilomatrixoma is asymptomatic benign tumor which is usually hard, slowly growing, single, painless, subcutaneous or dermal nodule covered with normal skin tissue. They can be cystic or solid, and usually mobile. It is more common in women than men. It is mostly located in the first two decades, in the upper extremities, in the head and neck region and especially in the preauricular region. Sebaceous cysts, chondroma, giant cell fibrohistiocytic tumor, foreign body reactions, atypical fibroxanthoma, ossified hematoma, metastatic calcification, dermoid cyst, metaplastic bone formation and osteoma cutis should be considered in differential diagnosis. Treatment is total excision, recurrence after it is not observed. If it is adherent to the skin covering it the skin tissue should be excised and removed to prevent residual tumor. Malignant transformation may rarely occur in recurrent cases. In our case, total excision was performed to exclude clinically atypical mass breast cancer metastasis. Pilomatrixoma can be confused with other skin lesions because of its rare occurrence, clinical features not being known, absence of a pathognomonic finding and various atypical forms. Total excision of these cases is important considering recurrence and even malignant variant having a risk of metastasis.

**Keywords:** Malherbe tumor, pilomatrixoma, excision, differential diagnosis

## PP-0574 [General Surgery Diseases]

# A Rare Case Report: Spontaneous Uterus Perforation

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**Introduction:** Uterine perforation is generally iatrogenic. It occurs frequently during surgical procedures. Antibiotic therapy is initiated and uterotonic agents are given. Surgical intervention may be necessary if the perforation area is large. It can be interfered with laparotomy or laparoscopy. We will present a case with spontaneous uterine perforation which is not associated with iatrogenic and surgical procedure (curettag, hysteroscopy).

**Case:** A 62-year-old female patient was admitted to the emergency service with abdominal pain. Physical examination revealed widespread tenderness in the abdomen and defense and rebound in the bilateral lower quadrants. In laboratory findings were HbB: 6.2 g/dl WBC: 48300 K/uL hCT: 20.7 crp: 135 mg/L glucose: 150 mg/dL albumin: 1 g/dL. Sepsis was considered in laboratory findings. Computerized abdominal tomography revealed free air and free fluid images and operation decision was taken. 1 cm of perforated area in the anterosuperior region of the uterus was detected in the exploration. Perioperative consultation from the department of obstetrics and gynecology was requested and TAH + BSO were performed. The patient without any complication in the postoperative follow-up was discharged on the fifth day.

**Conclusion:** It should be kept in mind that gynecologic pathology may be present in the exploration during the operation in patients in whom operation decision was taken detecting acute abdomen findings in emergency conditions.

**Keywords:** Perforation, spontaneous, uterus

## PP-0575 [General Surgery Diseases]

## Placing of Laparoscopic Peritoneal Dialysis Catheter and Treatment of Malfunction

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**Objective:** Peritoneal dialysis (PD) is a widely accepted modality in the treatment of end-stage renal disease, and it has some superiorities over hemodialysis. Laparoscopy is frequently preferred in the placement of continuous ambulatory peritoneal dialysis (CAPD) catheter as well as treatment of malfunction as in many different areas of abdominal surgery. In this video, we aimed to present the laparoscopic technique applied in our clinic for the placement of CAPD catheter and correction of malfunction.

**Video Content:** In placing CAPD catheter, intraabdominal exploration was performed with a 5mm trocar after pneumoperitoneum was formed with the veres needle from the supraumbilical area. Then Tenckhoff trocar is inserted from the subumbilical area. The CAPD catheter through this trocar is passed through the guide wire and is caudally advanced, and catheter felt is placed in the preperitoneal area and the tip is placed in the Douglas cavity. Entering the second 5mm trocar in case of need may help to place the catheter in the correct position. The catheter is then taken out of the abdomen by the PD nurse, from the point marked in the preoperative period, in a way that the second felt will be subcutaneous. In the case of CAPD malfunction, intraabdominal exploration was performed with the camera of 5mm trocar inserted from the supraumbilical area after the pneumoperitoneum is created with the existing catheter, and a second 5mm trocar is inserted from the opposite localization of the skin exit site of the CAPD catheter. As in the cases given in the video, it is possible to remove the tissue, which leads to omental wrapping or fimbria-induced catheter malfunction, from the catheter by a holder device and to position the catheter back into the pelvis after occlusion check.

**Conclusion:** Laparoscopic technique is a safe and minimally invasive method that can be preferred in the placement of CAPD catheter and correction of malfunction.

**Keywords:** Peritoneal dialysis, catheter, laparoscopy

## PP-0576 [General Surgery Diseases]

## Scar Endometriosis: Is It A Preventable Pathology?

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**Objective:** Endometriosis is defined as the presence of functional endometrial tissue in other parts of the body except the uterus. Endometriosis can be caused following gynecological or obstetric operations as a result of the endometrial tissue's getting out of uterine cavity.

This presentation discusses how to prevent scar endometriosis which is a rare complication that can be seen after gynecological surgeries.

**Material and Methods:** Nineteen cases with endometriosis who were admitted to our clinic between January 2013 and January 2018 were evaluated retrospectively and their ages, complaints and onset time, location and size of the masses were evaluated.

**Results:** The mean age of the patients was 30.8 (20-49). All cases had a history of cesarean section. All of the patients had pain and swelling symptoms at the incision site. Complaints of the cases occurred after an average of 1.8 years (6 months-3 years) after the last cesarean operation. Endometriosis was detected on the right side of the scar in 9 cases (47.4%), in the left side (36.8%) in 7 cases, in the midline (10.5%) in 2 cases and in the inguinal region (5.3%) in 1 case. In all cases, the lesions were totally excised by surgery. The diameter of the endometriosis masses was measured as 30 mm (10 mm-55 mm).

**Conclusion:** The incidence of scar endometriosis varies between 0.03% and 1.7% after cesarean section. Endometriosis should be the first diagnosis that should be considered when a mass is palpated at the side of scar tissue in the abdominal wall during physical examination in cases with a palpable mass in the lower abdomen and pain complaints consistent with menstrual cycle. However, pathologies such as incisional hernia, suture granuloma, abscess or abdominal wall tumor should be excluded by additional procedures. In the etiology of scar endometriosis, the most accepted theory is that the endometrial cells are considered

to be implanted iatrogenically in the skin secondary to surgical procedures for the uterus. In this study, endometriosis focus was found in only one of the cases after cesarean operation in the inguinal region apart from the scar edge and the endometriosis focus was detected in the neighborhood of cesarean scar in the remaining cases. The right side and other sides as localization were detected almost equal. We believe that the surgical field of the surgeon does not affect the formation area of scar endometriosis. In general, many obstetric surgeons clean the uterine cavity with wet or dry buffers after caesarean section. This increases the risk of endometrial tissue inoculation to the environment. Here, we think that irrigation of skin, subcutaneous, muscle and fascias with abundant physiological saline solution after the closure of the uterine cavity and not using the suture materials and surgical tools, which were used when suturing the uterus, for closing skin and subcutaneous are important to prevent the formation of endometriosis.

**Keywords:** Endometrium, surgery, cesarean section, endometriosis

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## PP-0577 [General Surgery Diseases]

# Evaluation of Patients Undergoing Laparoscopic Splenectomy Due to Idiopathic Thrombocytopenic Purpura: Single Center Experience

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**Objective:** In this study, we aimed to evaluate the operative, postoperative and long-term results of patients who underwent laparoscopic splenectomy due to idiopathic thrombocytopenic purpura (ITP) not responding to medical treatment.

**Material and Methods:** Patients who underwent laparoscopic splenectomy in our hospital with the diagnosis of ITP unresponsive to medical treatment between 2010 and 2017 were included in the study. The data of the patients were obtained by retrospectively reviewing the prospectively filled database. Age, gender, medical treatment before and after surgery, platelet counts at the time of admission, and on postoperative 7th and 30th days, information about the operation, perioperative morbidity, mortality information and treatment responses in long-term follow-up were examined. Perioperative morbidities were grouped according to Clavien-Dindo classification. Patients whose data were unsafe and postoperative follow-up information could not be reached were excluded from the study.

**Results:** Thirty eight patients (14 male and 24 female) were included in the study. 4 patients were excluded from the study due to insufficient data. The mean age of the patients was 38.89±16.13 (18-70) years. The mean platelet value at admission was 23240±25750/mm<sup>3</sup> (3000-139000/mm<sup>3</sup>). Thirteen of the patients underwent preoperative steroid therapy and 25 patients were treated with steroid + intravenous immunoglobulin (IVIg). The mean operative time was measured as 71.57±20.43 (45-135) minutes. The mean bleeding amount during surgery was 43.28±49.21 (10-250) cc. was measured. Laparoscopic splenectomy was performed using 3 ports in 4 patients, 4 ports in 4 patients and 5 ports in 3 patients. Advanced vessel sealing devices were used in all patients. Hilus control was performed with vascular stapler devices in 23 patients, vascular stapler devices and endoscopic clips were used in 15 patients. No perioperative mortality was observed in any of the patients. In 1 patient, 2 units of erythrocyte suspension replacement and 2 units of fresh frozen plasma replacement were performed (Clavien Dindo II) and 2 patients had postoperative atelectasis (Clavien Dindo I). None of the patients had major morbidity. Postoperative 7th day mean platelet value was 314823±213317/mm<sup>3</sup> (7000-770000/mm<sup>3</sup>) and postoperative 30th day mean platelet value was 352350±260029/mm<sup>3</sup> (8000-1030000/mm<sup>3</sup>). The mean follow-up period of the patients was 38.15±25.24 (6.53-88.57 months). During the follow-up period, 5 patients (13%) were unresponsive to splenectomy and 6 (16%) had refractory thrombocytosis.

**Conclusion:** Laparoscopic splenectomy can be performed safely in patients with ITP who do not respond to medical treatment. ITP can be treated in a large proportion of patients who do not respond to medical treatment by splenectomy.

**Keywords:** Idiopathic thrombocytopenic purpura, laparoscopic splenectomy, ITP, splenectomy

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## PP-0578 [General Surgery Diseases]

# Benign Cystic Peritoneal Mesothelioma

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**Introduction:** Benign cystic peritoneal mesothelioma (BCPM) is a rare tumor seen in the reproductive age of women and its physiopathology is not known. Most patients have undergone pelvic surgery, endometriosis, or pelvic inflammatory disease. It is usually detected incidentally during laparotomy because it rarely causes symptoms. Imaging methods may cause suspicion of BCPM. However, the diagnosis can only be confirmed by histopathological examination and immunohistochemical analysis. Total resection is recommended if possible. Although it is not malignant, it tends to relapse due to its biological behavior. In this article, a case of BCPM is presented.

**Case:** A 44-year-old female patient who presented with abdominal pain had a history of total abdominal hysterectomy, bilateral oophorectomy and omentum biopsy due to ovarian lesion by the department of obstetrics and gynecology. Pathology result was reported as cystic mesothelioma. Computed tomography (CT) revealed multicystic lesions, the largest of which was measured 65mm, were observed in the superior, lateral and inferior and lateral sides around the liver except for left lobe lateral segment. It was reported that the lesions extended towards the proximal of the hepatic flexure and transverse colon and multiple lymph nodes were observed in the mesentery root. It was entered into the abdomen with a median incision from the supraumbilical and subumbilical areas. A multiloculated cystic lesion was observed invading to the transverse colon proximal on the liver. No acid was observed. Right diaphragmatic peritoneum was separated and lateral peritonectomy was performed. The Glisson capsule was dissected. Right hemicolectomy and mesodissection was performed and the specimen was removed as one piece. The patient was discharged on the 6th postoperative day without any problem. The pathology result was reported as BCPM.

**Conclusion:** The possibility of BCPM should be considered when multiloculated cystic masses showing intraabdominal septation are detected. Cytoreductive surgery with peritonectomy is recommended because of frequent recurrence.

**Keywords:** Cystic, mesothelioma, peritoneum

## PP-0579 [General Surgery Diseases]

# A Case of Cavernous Lymphangioma in the Lumbar Region

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**Introduction:** Cavernous lymphangiomas are congenital anomalies of the lymphatic system. They appear as soft tissue mass with or after birth and are benign lesions. Although this rare disease is mostly located in the head and neck region, up to 9% can be located in the truncal region. In this report, a case of giant cavernous lymphangioma located in the lumbar is presented.

**Case:** A 20-year-old male patient presented with a 20 cm diameter irregular swelling in the right lumbar region. He described this swelling as being present in the same area since birth but stated that there was about two times size increase in the last year. The patient had no known systemic disease or previous history of surgery. Preoperative MR and CT imaging revealed a mass with mixed cystic and solid component in the subcutaneous tissue, with no evidence of vascular invasion or metastasis. The patient was consulted with plastic surgery and the mass was decided to be excised and it was totally excised with the intact macroscopic surgical margins and the resulting tissue defect was reconstructed with split thickness skin graft. In the final pathology, cavernous lymphangioma was reported. The patient had no apparent complaints at postoperative 3rd month follow-up.

**Conclusion:** Cavernous lymphangioma is a very rare lesion and the literature in this issue are mostly case reports. It usually gives symptoms in early childhood. Although it is benign, extensive excision of the mass is recommended to prevent recurrence.

**Keywords:** Cavernous, lymphangioma, excision

## PP-0580 [General Surgery Diseases]

# Ruptured Splenic Myeloid Sarcoma in a Patient with AML Diagnosis

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**Introduction:** Myeloid sarcoma is an extramedullary granulocytic tumor that can accompany many hematological malignancies such as acute myeloid leukemia (AML), chronic myeloid leukemia and myeloproliferative diseases. Lymph nodes, skin and soft tissues are the most common sites. Myeloid sarcoma is rarely seen in the spleen. In this article, a splenic myeloid sarcoma case

diagnosed in the pathological examination after splenectomy performed in a patient who was treated due to AML in an emergent condition will be presented.

**Case:** A 83-year-old patient followed up by hematology and receiving occasional treatment was admitted to the emergency service with complaints of abdominal pain and fatigue for 1 day. His vital signs were stable, and physical examination revealed a tenderness and defense in the epigastric region and in the left upper quadrant. In laboratory values, leukocyte was 24000/ $\mu$ L and hemoglobin was 8.6 mg/dl and other parameters were within normal limits. The patient had no history of operation and was receiving aspirin. It was learned that the patient had heart failure and chronic obstructive pulmonary disease (COPD) diagnoses. The X-ray did not reveal any abnormality. The patient's abdominal computed tomography (CT) revealed splenomegaly and hepatomegaly and scattered hypodense areas due to hematoma and perisplenic and perihepatic fluid were detected in the splenic paranchyma. Despite two units of erythrocyte replacement, the patient's abdominal pain increased and hemoglobin levels decreased to 7 mg/dl and laparotomy was recommended. The patient was operated after the preoperative recommendations for additional problems were taken from the relevant departments. Laparotomy revealed hepatomegaly and splenomegaly, especially hemorrhagic fluid around the liver and spleen. Splenectomy was performed in the patient. In the exploration, a 1x1 cm GIST-compatible appearance was detected in the large curvature of the stomach and the area related to wedge resection was excised. The patient was continued to be followed up in the intensive care unit postoperatively and died on the second postoperative day. The pathology result of the patient was reported as myeloid sarcoma for the spleen and schwannoma for the stomach.

**Conclusion:** Spleen myeloid sarcoma is a rare pathology and is usually associated with hematological malignancies. It can rarely be encountered with its isolated forms. It can be seen at any age and is more common in men than women. Symptoms may vary widely. Imaging methods, histology and molecular studies are helpful in the diagnosis. In cases of emergency, such as the patient described in the case, there are also cases diagnosed with surgery. Treatment options such as surgery, chemotherapeutic agents, radiotherapy, and stem cell transplantation are available in appropriate patient groups.

**Keywords:** Sarcoma, spleen, mass, bleeding

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## PP-0581 [General Surgery Diseases]

# Transparent Cell Carcinoma of the Abdominal Wall Endometriosis (Rare case)

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**Introduction:** Endometriosis is defined as the presence of stroma and endometrial glands outside the uterine cavity. Abdominal wall endometriosis accounts for 0.4-2% of cases and is usually seen in the previous abdominal incision scar, especially in the caesarean or appendectomy incision area. Malignant transformation of abdominal wall endometriosis is a very rare event. In the literature, 17 cases of clear cell carcinoma were detected in the post-caesarean scar endometriosis. We wanted to share our patient who we operated because of a mass in the abdominal wall with clear cell carcinoma on the basis of endometriosis.

**Case:** A 43-year-old female patient described caesarean section 18 and 16 years ago. In the abdominal examination, a mass of approximately 10x10 cm was found adjacent to the left side of the Pfannenstiel incision scar towards abdominal left quadrant. Lower abdominal computerized tomography revealed a mass of 9 x 8.5 cm with septated and solid components whose margins cannot be clearly separated from rectus muscle sheath in the left lower quadrant. Abdominal wall excision was performed so that the mass was removed en bloc. The mass invaded fascia and preperiton. The abdominal wall defect was repaired using a 15x 15 cm prolengraft. The patient without any postoperative complication was discharged. The pathology result was reported as a 12x10x10cm clear cell carcinoma which developed on the basis of endometriosis. Total hysterectomy and bilateral salpingoopherectomy (TAH + BSO) and pelvic lymphadenectomy were performed by the gynecology department. Bilateral tubal and ovarian lymph node metastasis were not reported in the usual morphology in the pathological evaluation. Clear cell carcinoma developing on the basis of endometriosis is a rare condition. Addition of TAH, BSO and lymphadenectomy to its resection with clean margins are still controversial.

**Keywords:** Endometriosis, clear cell carcinoma, abdominal wall mass

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## PP-0582 [General Surgery Diseases]

# A Rare Case: Dermatofibrosarcoma Recurring in the Anterior Abdominal Wall

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**Introduction:** Dermatofibrosarcoma protuberans (DFSP) is a rare locally aggressive tumor of the dermis, but its metastasis is very rare. The effectiveness of chemotherapy and radiotherapy is limited. It can be differentiated from other soft tissue tumors by inspection findings. It starts usually as a small brown-red single nodule and may become ulcerated multiple nodular. DFSP should be suspected in such patients. Its treatment is resection with intact surgical margins. Local recurrence is common in patients with surgical margin positivity. We presented a case being admitted with local recurrence of this rare tumor.

**Case:** A 73-year-old male patient was operated upon detection of a mass in the anterior abdominal wall, and his histopathology was reported as dermatofibrosarcoma protuberans (DFSP) and did not receive any additional treatment. He was admitted with a palpable swelling in his operation area approximately 1 year after his first operation. The examination revealed limited mass in the anterior abdominal wall and pathological lymphadenopathies (LAP) in the inguinal region. Resection was performed to the mass with wide surgical margins. Excisional biopsy was performed in the inguinal LAPs. Mass histopathology was reported as DFSP and that of LAPs was reactive. In the immunohistochemical study on the mass, CD34 (+), CD10 focal (+), SMA (-), MSA (-), F13A (-) in tumor cells and proliferative index with Ki67 was 20%. Although the surgical margins of the mass were intact, cavity resection was performed again because 1 mm of surgical margins were obtained in two areas and no tumor was seen. No additional treatment was planned. The case is followed up smoothly in the postoperative second year.

**Conclusion:** Although dermatofibrosarcoma protuberans is rarely detected, local recurrence is common if resection is not performed with intact surgical margins. The patients who are thought to be DFSP with the findings of the inspection should be resected with intact surgical margins and their follow-up should be done keeping in mind the possibility of local recurrence.

**Keywords:** Dermatofibrosarcoma, surgical margin, local recurrence

## PP-0583 [General Surgery Diseases]

# A Case of Spermatic Cord Liposarcoma Imitating Right Inguinal Hernia

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**Introduction:** Spermatic cord liposarcoma is a rare disease characterized by inguinal or scrotal swelling. These tumors are often thought to be inguinal hernia or hydrocele at the time of admission. As far as we know there are about 200 cases previously reported in the literature.

**Case:** A 68-year-old male patient was admitted to the outpatient clinic with a complaint of painless swelling increasingly growing in 12 months in the right inguinal region. In physical examination it was observed that the lesion was getting smaller in supine position, and becoming larger when intraabdominal pressure increased, and a hard fixed lesion was palpated in the lateral. Superficial ultrasonography was reported as right inguinal hernia and 37 mm lymphadenopathy or mass lesion. Additional symptoms such as constipation, nausea, vomiting, and weight loss was not detected. He was referred to the interventional radiology department for biopsy. It was reported by interventional radiology that it was not suitable for biopsy as it was close to intestinal and vascular structures due to inguinal hernia. It was decided to perform surgery due to inguinal hernia repair and mass excision. No pathology was detected in preoperative complete blood count, biochemistry and lung X-rays. There was no metastatic finding in abdominopelvic computed tomography. Right direct hernia sac and spermatic cord-induced hard fixed lesion were detected in the exploration performed in right inguinal area. The mass was excised by preserving the cord structures, ilioinguinal lymph node dissection and right inguinal (liechtenstein) repair were performed. Histological evaluation revealed 43mm well-differentiated myxoid liposarcoma and no metastasis was seen. The patient was discharged on the 3rd postoperative day. No recurrence or metastasis was detected in the 12-month follow-up period.

**Conclusion:** Paratesticular sarcomas are rare neoplasms. Most of them originate from the spermatic cord. Peroperative diagnosis is rare and often confused with inguinal hernia, hydrocele or spermatocele. Right inguinal hernia and inguinal mass were evaluated separately in our case. Primary spread of liposarcomas is local invasion. The resection line should be kept wide to prevent local spread. Mortality rates are reduced by resection with clean surgical margins.

Spermatic cord liposarcoma is a rare disease and should be considered in the differential diagnosis of inguinal hernia, hydrocele and spermatocele.

**Keywords:** Inguinal hernia, spermatic cord, liposarcoma

## PP-0584 [General Surgery Diseases]

# A Rare Cause of Abdominal Left Lower Quadrant Pain, Acute Appendicitis in a Patient with Situs Inversus Totalis

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**Introduction:** Situs inversus totalis is a rare disease in which the chest and abdominal organs are replaced. Left lower quadrant pain may have different causes. In Situs inversus totalis (SIT), physical examination findings consistent with acute appendicitis may occur in the left lower quadrant and it is very difficult to diagnose acute appendicitis if SIT disease is not known. Our experience of acute appendicitis case in an adult in whom SIT anomaly has not been previously recognized was shared.

**Case:** A 33-year-old male patient was admitted to the emergency service with complaints of left lower abdominal pain for three days. His body temperature was 36.4 °C and vital signs were within normal limits. He had tenderness, defense and rebound findings in the left iliac fossa. His white blood cell count was 18.380 10<sup>9</sup>/L and there was no abnormality in the biochemical parameters. Dextrocardia was detected in the direct X-ray. Abdominal ultrasonography (USG) was consistent with situs inversus with liver on the left and spleen on the right, but appendix was not visualized on the right or left. In contrast-enhanced abdominal tomography (CT), the patient was seen as consistent with situs inversus, the appendix was in left iliac fossa as a tubular structure with inflammation around left psoas muscle. The patient underwent an appendectomy with an oblique incision from the lower left quadrant. The patient who tolerated the regimen 3 was discharged with healing on the postoperative 1st day. The pathology report was reported as consistent with acute appendicitis.

**Conclusion:** Situs inversus (SI) is a congenital positional anomaly which is a condition where intra-abdominal internal organs develop in the wrong position. When both the thoracic and abdominal organs are replaced, the condition is called SIT. SIT is an autosomal recessive developmental disorder and its prevalence in the general population is only 0.001% to 0.01%. Acute appendicitis is one of the most common causes of acute abdominal pain and requires urgent surgical intervention. Typical symptoms of acute appendicitis begin with an indeterminate abdominal pain in the epigastric or periumbilical region. After a few hours, the pain is localized to the right lower quadrant. Left lower quadrant pain may be caused by many diseases. Other causes include diverticulitis, inguinal hernia, gastroenteritis, atypical right-sided appendicitis, renal colic, cystitis, epididymitis, prostatitis, left ovarian pathologies, and PID. In physical examination, the presence of peak heart rate on the right, heart sounds more pronounced on the right than on the left, liver's being palpable on the left suggest the SIT. The presence of dextrocardia and gastric fundus gas on the right side in the chest radiographs are in favor of SIT. ECG findings are helpful in the diagnosis of dextrocardia. In addition to acute appendicitis signs and symptoms, the patient's having tenderness, defense and rebound symptoms in the left lower quadrant of the abdomen may suggest acute appendicitis diagnosis with SIT. In conclusion, if we observed dextrocardia in patients with left lower quadrant pain, we should suspect acute appendicitis.

**Keywords:** Situs inversus totalis, acute abdomen, appendicitis, left quadrant pain

## PP-0585 [General Surgery Diseases]

# Thigh Abscess Secondary to Duodenum Fistulization of Renal Cell Carcinoma: A Case Report

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**Introduction:** Renal cell carcinomas are known for their local invasions as well as their potential for metastasis. Invasion to the duodenum may rarely develop and clinically present with bleeding or gastric outlet obstruction. In this study, we planned to present a patient with right renal cell carcinoma who developed abscess and fasciitis secondary to duodenum fistula.

**Case:** The abscess of a 62-year-old male patient was drained by orthopedics team due to abscess developing in the right thigh while being followed up in palliative care unit due to right renal cell carcinoma. The patient was consulted to us because it was seen that she had bilious fluid from his thigh during the postoperative period. It was observed in the oral-intravenous abdominal tomography that oral contrast passed to the retroperitoneal area and it advanced to the right thigh. With these findings, the patient was operated under emergency conditions and the duodenum fistula was repaired. In the postoperative period, the patient had defecation and tolerated the oral regimen. Although he did not have any sign of leakage, his general condition deteriorated and he was transferred to the reanimation unit. The patient's brain death occurred on the second day of follow-up.

**Conclusion:** It should be kept in mind that duodenum invasion may develop rarely in right-side localized renal cell carcinomas and retroperitoneal abscess and even thigh abscess secondary to fistulization may develop.

**Keywords:** Duodenum, renal cell carcinoma, thigh abscess

## PP-0586 [General Surgery Diseases]

# Desmoid Tumor in the Anterior Abdominal Wall of a Under Follow-up Due to Endometrial Stromal Sarcoma, Case Report

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**Introduction:** Endometrial stromal tumors are rare and constitute approximately 0.2% of all uterine malignancies. The most common symptoms are abnormal uterine bleeding, pelvic pain and dysmenorrhea. The extrauterine pelvic extension of LG-ESS is often associated with endometriosis. Adjuvant chemotherapy is the primary choice to prevent relapses. A literature review has shown that recurrent LG-ESS may occur 10 to 20 years after initial diagnosis. Stage is the most important prognostic factor. The most common sites for recurrence are pelvis and abdomen. In this case report, a case with soft tissue induced desmoid tumor in the anterior wall of the abdomen 7 years after the first surgery was presented.

**Case:** A 60-year-old female patient was admitted to the external center with complaints of pain in the right lower quadrant in 2011. The result of the evaluation was a mass in endometrium and bilateral salpingooforectomy, hysterectomy, omentectomy, lymph node dissection and rectosigmoid excision and end-to-end colorectal anastomosis were performed in the patient with the framework of debulking surgery. The pathology result was reported as mesenchymal tumor consistent with low grade endometrial stromal sarcoma. In the early postoperative period, acute abdomen picture developed and anastomosis leakage was seen in the patient in the tomographic evaluation.

Re-operated patient underwent hartmann colostomy procedure. The patient received adjuvant chemotherapy after discharge. In 2013, the patient was taken into operation in order to close the end-colostomy. However, the operation was terminated without closure of colostomy after perforation repair upon development of small intestine injury as a result of the inability to distinguish distal rectum and vaginal cuff borders and adhesions in the intraoperative evaluation. The patient who was controlled until December 2017 and did not have any problems after discharge was had abdominal pain and dyspeptic complaints and cholelithiasis and a mass on the previous operation scar in the anterior abdominal wall were detected in USG evaluation. A mass in the right lower quadrant of the abdomen whose margins could not be differentiated from the rectus muscle and having a 42 \* 23 mm size with SUVmax of 5.2 was detected. Biopsy results of the mass revealed desmoid tumor and cholecystectomy and mass excision were performed on the anterior abdominal wall. The surgical margins were negative in the frozen examination.

**Conclusion:** Sarcomas may recur after years. The history of the patient should be considered in the masses which are palpated especially on surgical scars.

**Keywords:** Stromal tumor, abdominal anterior wall masses, desmoid tumor

## PP-0587 [General Surgery Diseases]

# Pilonidal Sinus Surgery with Radial Laser Probe: Surgical Technique and First Experience Results

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**Objective:** Treatment of pilonidal sinus disease is laborious. Although many surgical and non-surgical methods have been used, no consensus has been reached for the best treatment. In this presentation we describe an innovative technique created by the destruction of the pilonidal cyst with a radial laser probe (Neo V, Neo Laser, Israel). Thanks to the energy supplied, it is ensured that the sinus epithelium is destroyed and the system is simultaneously obliterated.

**Material and Methods:** The data of the first 10 patients operated with this technique between November 2016 and November 2017 were analyzed retrospectively. The mean follow-up period was 120 days (80-135). Eight of the patients were male and 2 of them were female. The mean age of the patients was 25.2 (20-39).

**Results:** The success rate was 90% (10 patients/1). The recurrence rate was 1% (1 patient/10). All of the patients were hospitalized for 1 day and no condition developed requiring re-hospitalization during follow-up. The mean recovery time was 15.4 days (4-25). The mean duration of pain relief intake was 5.1 days (1-14). Complications developed in 2 patients with 1 hematoma (1%) and 1 inflamed discharge (1%). They were all treated medically.

**Conclusion:** The destruction of the pilonidal cyst cavity with a laser probe is a safe, simple and minimally invasive technique. The success rate is good. The length of hospital stay is short, the pain is mild and the number of patients who require postoperative care as well as complications is very small. It allows a fast return to work or school. This technique can be recommended as the first-line treatment of the majority of pilonidal sinus disease. The only problem is the cost of the establishment of the system for the hospital.

**Keywords:** Pilonidal sinus, laser, minimally invasive surgery

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## PP-0588 [General Surgery Diseases]

# Abdominal Wall Endometriosis after Cesarean Section: 2 Case Reports

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**Objective:** Endometriosis is defined as a condition associated with pain due to presence of endometrial glands and stroma in the abnormal localization outside the endometrial cavity of the uterus and inflammatory estrogen sometimes with infertility. The prevalence of subcutaneous endometriosis after caesarean section is estimated to be between 0.03% and 1% and it is estimated that it constitutes 1% of all external endometriosis cases. In this case report, we aimed to present two cases of abdominal wall endometriosis in the rectus abdominal muscle that was unrelated to cesarean incision 2 and 4 years after caesarean section because it is a rare condition, it is difficult to diagnose and it is a problem that other branch physicians may encounter.

**Case 1:** A 38-year-old female patient who had a cesarean section two years ago and was admitted to the general surgery outpatient clinic with a painful mass on the right side of the pfannenstiell incision, felt pain and a mass in this region for a year. There was a history of increased mass and pain intensity during menstruation. In the abdominal examination a sensitive and solid mass, fixed to the incision with a size of about 4x2 cm on the right side of pfannenstiell incision scar was detected. Abdominal computed tomography (CT) revealed asymmetric soft tissue increment (granulation tissue, fibrosis?, endometriosis focus?, desmoid tm? with a lower possibility), with fusiform configuration, not displaying clear margins having maximal transverse diameter of 3.3 x 2 cm as much as it can be evaluated at the inferior lower end of the abdominal wall in the right half of the rectus muscle. The approximately 3x3 cm fibrotic tissue on the fascia, which displayed extension to the rectum muscle and subcutaneous tissues, and the mass lesion were excised with incision performed on the previous one by involving the fascia and 2 cm rectus muscle and the sub-fascia. The pathology result was reported as soft tissue endometriosis.

**Case 2:** A 31-year-old patient who had a cesarean section four years ago and was admitted to the General Surgery outpatient clinic with a painful mass 4 cm below the umbilicus for two years. Abdominal examination revealed a palpable mass lesion of 3x2 cm having tenderness in the middle lower quadrant. A well circumscribed hypoechoic heterogeneous solid lesion with a size of 30x16 mm was observed at a distance of 1 cm from the skin in the localization described in USG. The lesion, which extended to the fascia and rectum muscle, was excised with the incision made at the relevant localization in the elective surgery. The pathology result was reported as endometriosis.

**Conclusion:** In conclusion, history of previous gynecological surgery and increased pain and swelling in the menstruation periods should be questioned well in the evaluation of abdominal anterior wall masses. In differential diagnosis, endometriosis may be considered and diagnosis and treatment time can be shortened. Surgical relapse can be prevented by performing wide excision in scar endometriosis surgery.

**Keywords:** Abdominal anterior wall, abdominal mass, endometriosis, rectus, caesarean history

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## PP-0589 [General Surgery Diseases]

# Primary Epiploic Appendagitis Confusing With Diverticulitis

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**Introduction:** Primary epiploic appendagitis is a rare inflammatory disease of the appendix epiploicas of the colon. It is not a disease that requires surgery but it is clinically important that the diagnosis is correct and early because it imitates the acute abdominal pictures that require surgery. In this report, we aimed to present a 35-year-old female patient who was admitted with the complaint of abdominal pain and treated with iv antibiotic treatment based on computed tomography (CT) data and clinical findings and was diagnosed with diverticulitis and treated with antibiotics. Then colonoscopy and CT findings were reevaluated and the final diagnosis of primary epiploic appendagitis was made.

**Case:** A 35-year-old female patient was admitted to our center with right upper quadrant pain for 2 days. She had a history of laparoscopic appendectomy 3 years ago and a history of laparoscopic cholecystectomy 13 years ago. Physical examination revealed tenderness in the right upper quadrant and suprapubic region. The patient's laboratory values were HGB 13.4 g/dL, WBC 15100/mL, and CRP 17.8 mg/dL. In the patient's contrast enhanced abdominal (upper) and pelvic (lower abdomen) CT, multiple diverticular appearances the being the largest of 2 cm in the medial of the colon adjacent to the hepatic flexure surrounded by inflamed tissue were observed. The findings were reported as consistent with acute diverticulitis. The patient was diagnosed with diverticulitis and treated with iv ceftriaxone and ornidazole for 7 days. Clinical findings regressed on the third day of the treatment. The patient's clinical findings and white blood cell count returned to normal on the seventh day. In the clinical follow-up, no recurrence was observed in the patient's complaints and the patient was discharged. One month later, the patient underwent colonoscopy and mucosa and lumen were normal in cecum, ascending colon, transverse colon and descending colon and no diverticular appearance was reported. The patient who underwent control CT was re-evaluated with radiography of previous CT images. The case was evaluated as epiploic appendagitis since the signs of edema and inflammation in the paracolic mesenteric fatty tissue distances that reached to the level of the ascending colon and hepatic flexure significantly reduced; densitometric measurement value from the lesion surrounded by peripheral rim having high density with blurred pericolic margins at the medial side of the ascending colon adjacent to the hepatic flexure in previous CT was 31 HU and the lesion had close neighborhood with ascending colon.

**Conclusion:** Primary epiploic appendagitis is a rare inflammatory disease that causes sudden onset of local abdominal pain caused by torsion of epiploic appendix or by thrombus of appendiceal veins. Acute cholecystitis, appendicitis, diverticulitis, and acute gynecological diseases are also included in the differential diagnosis of epiploic appendagitis and may imitate acute abdominal pictures requiring surgical intervention. Treatment with conservative antibiotics is possible. The imaging can easily be diagnosed with gold standard CT. It should be taken into consideration in differential diagnosis in order to prevent unnecessary surgical interventions.

**Keywords:** Epiploic appendagitis, diverticulitis, appendix epiploica

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## PP-0590 [General Surgery Diseases]

# Sacroccocygeal Pilonidal Sinus: How Significant is Histopathological Evaluation?

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Pilonidal sinus has long been known and has a wide range of treatment methods. Since the disease affects mostly young adults, it causes a significant loss of labor force. The ideal results have not been achieved in any of the methods applied to date. The ideal treatment method should be easy to apply and the complication rate should be low. Medical treatment options include sclerosing injection, cryosurgery and collagenase administration. In surgical treatment, open methods such as excision and open release, marsupialization, incision and curettage and closed methods such as vertical excision and primary closure, oblique excision and primary closure, Karydakís method, romboid excision and Limberg procedure and plastic procedures are used. Surgical methods (especially those with flaps) are more preferred in the treatment. We retrospectively evaluated 1982 patients who were operated between March 2011- 2017 in our clinic according to 3 parameters. When we examined (gender, primary/recurrence, pathology report) 79% male and 31% of women were seen. We found that 98.5% of our cases were primary, and 1.5% of them were recurrence cases. In the histopathological examination, pilonidal sinus was reported as 96,3%, pilonidal sinus with abscess formation was reported as 3,7% and malignancy was 0%. As a result, no malignancy was found in any of the cases and we found that histopathological examination was unnecessary for cost-efficacy.

**Keywords:** Sacroccocygeal, pilonidal sinus, pathological examination

## PP-0591 [General Surgery Diseases]

# Clinical Improvement Under Conservative Follow-Up in Cases Developing Acute Mechanical Intestinal Obstruction Due to Bezoar: A Single-Center Retrospective Study

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**Objective:** In this study it was aimed to retrospectively evaluate the clinical results of patients who were examined and treated with acute mechanical intestinal obstruction due to bezoar.

**Material and Methods:** A total of 12 patients who were evaluated and treated with the diagnosis of bezoar between the years 2012-2017 were evaluated retrospectively. Demographic characteristics of the patients were evaluated by using the medical archive of the clinic. After detailed evaluation, patients with bezoar in the different levels of gastrointestinal system and associated acute mechanical intestinal obstruction were included in the study. The clinical data (physical examination findings, laboratory results, radiological evaluations, follow-up times, treatment methods, etc.) of the patients during outpatient and inpatient follow-up were schematized by the Microsoft Excel program. In the discussion part of the study, a retrospective evaluation of the clinical data was made.

**Results:** Of the patients included in the study, seven patients were male and 5 patients were female. The mean age was calculated as 57 years. 7 patients (58%) had abdominal surgery in their histories. After the routine examinations at admission, enhanced whole abdominal computed tomography (CT) images of the patients were taken. 9 patients (75%) were hospitalized and 3 patients (25%) were followed-up in outpatient clinics. Four patients (33%) were followed conservatively, whereas 8 patients (67%) underwent surgical intervention. Patients whose clinical findings improved were discharged with recommendations to come to control.

**Conclusion:** Clinical improvement without surgical interventions can be achieved in selected bezoar cases with acute mechanical intestinal obstruction by correct diagnosis and proper conservative follow-up. In this way, not requiring surgery reduces the morbidity and mortality rates to a minimum.

**Keywords:** Abdominal surgery, bezoar, ileus, conservative follow-up

## PP-0592 [General Surgery Diseases]

# Extended Right Colon Complete Mesocholic Excision and Right Hepatectomy after Selective Right Portal Vein Embolization in Metastatic Colon Tumor

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**Introduction:** Colorectal cancers are the third most common cancer type and the 2nd most frequent cause of cancer-related deaths. The 5-year survival rate in patients with metastatic colon cancer is 13%. While colon cancers that had previously metastasized to the liver were considered as inoperable, now first colon then liver, first liver then colon, and combined surgery procedures have been defined, it has been shown to increase the 5-year survival rates. The most important point here is that the liver tissue remaining after liver resection is enough for the patient and the patient's effort capacity is sufficient for these two separate operations. 5-year survival rate was 40% and the 10-year survival rate was close to 30% after a curative operation in liver metastasis colon tumors. Selective portal vein embolization, ligation, two-stage liver resection, and ALPPS procedure have been described in order to obtain a sufficiently healthy and tumor-free liver volume. Simultaneously, total mesocolic resection of primary colon tumors with liver metastases is an accepted procedure because this is seen as the highest strategy with curative potential. However, combined resections are discussed due to high morbidity rates.

**Case:** The colonoscopy performed due to bleeding during defecation revealed bleeding ulcer focus in hepatic flexure in an 82-year-old female patient with hypertension as a comorbid disease. A mass lesion was detected radiologically in the right lobe of the liver with a metastatic appearance in multi foci in the computed tomography performed for staging on biopsy result being consistent with adenocarcinoma. Right portal vein embolization was decided to increase the capacity of the left liver in the

patient and increase the blood supply for hyperplasia. In the control computerized tomography performed 6 weeks after the embolization by the interventional radiology team, it was detected that the volume of the left lobe increased by approximately 40%, and there was no newly developed metastasis. Neoadjuvant chemotherapy treatment was applied during this transition period. The patient underwent right hepatectomy and extended total mesocolic right colectomy. There was no obvious complication after surgery.

**Conclusion:** Combined colectomy and hepatectomy in a single stage is a feasible method following a variety of procedures to increase the selective liver lobe volume with preoperative neoadjuvant chemotherapy before surgery in patients with adequate exercise capacity but not sufficient healthy liver volume without tumor.

**Keywords:** Liver metastasis, colon cancer, portal vein ligation, total mesocolic excision

## PP-0593 [General Surgery Diseases]

# Our Laparoscopic Splenectomy Experience in Patients with Idiopathic Thrombocytopenic Purpura (ITP) Diagnosis

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**Objective:** ITP is an autoimmune etiology characterized by blood platelets below 100000/mm<sup>3</sup>. Its prevalence in the community is 4,000 per 100000. Patients who do not respond to steroid and intravenous immunoglobulin therapy have an indication of splenectomy. Laparoscopic splenectomy has been successfully performed in recent years with ITP patients with normal size spleen.

**Material and Methods:** A total of 23 ITP patients underwent laparoscopic splenectomy at Marmara University Pendik Training and Research Hospital between May 2012 and January 2018. The data of these patients were analyzed retrospectively. Of the patients who underwent laparoscopic splenectomy, 12 of them were female and 11 of them were male. The median age of the patients was 33 years. The mean duration of hospitalization of the patients was 4.1 days. No mortality was observed in any patient. Intraoperative and postoperative bleeding were minimal. Therefore, blood transfusion was not required. Atelectasis developed in 1 patient as morbidity.

**Results:** Idiopathic thrombocytopenic purpura is a hematological disease characterized by autoimmune etiology, mucocutaneous bleedings and low platelet counts. The cause of the disease is the formation of autoantibodies against platelets. Therefore, platelets are rapidly destroyed in the spleen and mucocutaneous and petechial hemorrhages occur as a result of thrombocytopenia. Hemorrhage may give symptom in the form of menometrorrhagia in gingivas as hematuria or melena. The risk of intracranial hemorrhage is high when the platelet count falls below 10000/mm<sup>3</sup>. The first-line treatment of the disease is 1 mg/kg/day prednisone treatment. Relapses are quite common after 3 weeks of treatment. In this case, intravenous immunoglobulin treatment may be given. However, splenectomy is necessary if it does not respond to this treatment. Platelet counts rapidly increase to normal levels after splenectomy in 75-85% of the patients. However, complications such as surgical site infection, pancreatitis and hemorrhage can be seen in 15-20% of patients receiving steroid therapy, with immunosuppressive effect, for a long time before the surgery. Therefore, the application of minimally invasive surgery in patients with ITP suggests that good results can be obtained. In our series, the morbidity rate was 4%. No intraoperative bleeding occurred. We had no mortality.

**Conclusion:** Laparoscopic splenectomy can be performed safely in elective conditions in patients with ITP.

**Keywords:** Idiopathic thrombocytopenic purpura, laparoscopic splenectomy, minimally invasive surgery

## PP-0594 [General Surgery Diseases]

# Supralevator Abscess by Necrosis of the Anterior Abdominal Wall

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Perianal abscess is a common benign anorectal disease and can cause serious complications if left untreated. The most frequent and serious complications in perianal abscess are fournier gangrene in the acute period and perianal fistula in the chronic period. The cases with necrotizing fasciitis in the anterior abdominal wall are much more rare and thus we aimed to present here. The patient was referred to us from the external center due to abdominal pain and acute abdomen 3 days ago. Tomographic imaging

of the patient revealed free air in the parietal and paravesical areas in the pelvis and a collection and free air in the right anterior wall of the abdomen. A laparotomy decision was made because of acute abdomen findings consistent with acute abdomen in the clinic of the patient. Perioperatively, a collection extending along pararectal adipose tissues from the supralelevator region along anterior wall of right abdomen in preperitoneal area and partly necrosis were observed. The patient was discharged with healing by VAC treatment after debridement and drainage.

**Keywords:** Necrotizing fasciitis, perianal abscess, supralelevator abscess

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## PP-0595 [General Surgery Diseases]

# Responses of Patients with Irresectable Peritoneal Surface Malignancy to Laparoscopic Hyperthermic Intraperitoneal Chemotherapy and Induction Chemotherapy

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**Objective:** Induction chemotherapy is a systemic method used to provide resection in irresectable cancers and locally advanced cancers and to enable surgery by reducing tumor burden. In this study, the results of patients with peritoneal surface malignancy which were irresectable with laparoscopic hyperthermic intraoperative intraperitoneal chemotherapy as induction chemotherapy have been reported.

**Material and Methods:** The results of the patients who underwent laparoscopic hyperthermic intraperitoneal induction chemotherapy until 2013-2018 were evaluated.

**Results:** Fourteen patients underwent laparoscopic hyperthermic intraperitoneal chemotherapy. The mean age of the patients was 53.8±8.75 (32-74). Eleven patients were female and 3 of them were male. The mean procedure time was 2 hours 30 minutes±1 hour and 16 minutes. Of the tumors, 8 were associated with gastric cancer, 4 were due to colon cancer, 2 were due to biliary tract, 1 was due to peritoneal mesothelioma and 1 had peritoneal metastasis due to ovarian cancer. Peritoneal cancer index decreased in 3 of gastric cancer patients (37.5%), ovarian cancer patient (100%) and mesothelioma (100%) and surgery and hyperthermic intraperitoneal chemotherapy could be performed. No early or late complications were observed. Acid could be controlled in all patients. Acid could not be controlled only in the peritoneal metastasis of the liver metastasis of gastric cancer. The disease-free survival of the patients was 3-11 months (±3.14) and the overall survival was 8.9±3.28 months.

**Conclusion:** Laparoscopic hyperthermic intraperitoneal chemotherapy may be a method for reducing tumor burden and controlling acid in patients with irresectable peritoneal surface malignancy.

**Keywords:** Peritoneal surface malignancy, laparoscopic hyperthermic intraperitoneal chemotherapy, induction chemotherapy

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## PP-0596 [General Surgery Diseases]

# Polycystic Over Syndrome as a Predisposing Factor in Pilonidal Sinus Disease

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**Objective:** Male gender, obesity, occupations or sports requiring sitting, excessive body hair, poor body hygiene and excessive sweating are described as the primary risk factors for pilonidal sinus disease (PSD). Polycystic ovarian syndrome (PCOS) affects approximately 2%-7% of women in general population. Hirsutism is defined as excessive terminal hair growth in an androgen-sensitive skin distribution in women and is the most common cause of which is PCOS.

The aim of the study is to determine whether PCOS can be shown as one of the uptake factors of PSD.

**Material and Methods:** This is a retrospective study. 102 female patients who underwent surgery due to symptomatic PSD were included in the study. The control group comprised of 215 female patients from general surgery and gynecology clinic without pilonidal sinus disease. Age, body mass index (BMI), number of baths taken per week, pcos, family history were examined as risk



factors and compared between the two groups. Depending on the BMI range, 20–25.9, 26–29.9, and over 30, patients were classified as normal range, overweight, and obese, respectively.

**Results:** In terms of BMI, family history, age, number of baths, there was no significant difference between the two groups. The number of patients who has pcos was 19(%18.6) in the study group, while it was 8(%3,5). in the control group. Statistically significant difference has been found between, study and control groups ( $p < 0,05$ ).

**Conclusion:** Many studies have shown a positive correlation between obesity and PS. In our study we did not detect a statistical significance between BMI and PSD. Many studies have reported that practicing good hygiene reduces the risk of PSD. This effect is believed to be associated with the removal of collected hair from the intergluteal sulcus. In our study, the number of baths per week was similar for both groups. Family tendency is also an important factor. Doll et al. 7 reported that family tendency accelerates the development of PSD, causing higher risk of recurrence, while suggesting that the positive patients should be closely followed up. Family history was evident in %32.3 of our study group that consistent with the literature. There is no literature on PCOS and PSD association. In our study we have found statistically significant difference between two groups because this might be the increase correlation of hirsutism and PCOS.

PCOS could increase the risk of PSD because the most common cause of hirsutism is pcos.

**Keywords:** PCOS, PSD, hirsutism

## PP-0598 [Hepatobiliary Surgery]

# Asymptomatic Bilioenteric Fistula and Gallstone Ileus: Presentation of Two Consecutive Cases

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**Introduction:** Mechanical bowel obstructions due to gallstone (ST) is a rare cause of mechanical ileus which may be encountered in the course of acute and chronic cholecystitis affecting generally elderly women.

**Case 1:** A 69-year-old female patient who did not have a comorbid disease except hypertension and atrial fibrillation was admitted to the emergency service with the complaint of colic-style abdominal pain, nausea and vomiting for three days. She was taken to the operation due to ST ileus since air was detected in the bile ducts, she had a state of ileus in proximal bowel loops and a stone causing obstruction in jejunoileal loops was detected in computed tomography. Abdominal radiography revealed diffuse air fluid levels. ST segmentary which was in 140 cm distal from the Treitz ligament causing obstruction, was removed by bowel resection. The procedure for the gallbladder was left to the second session and the procedure was terminated.

**Case 2:** A 67-year-old patient presented with acute abdominal pain spreading to the back received symptomatic treatment in the emergency service two times in a year. The patient applied to the physical therapy and rehabilitation department for back pain. Abdominal ultrasound on suspicion revealed multiple millimetric stones in the gallbladder and was referred to the general surgery department. The patient did not have comorbid disease except being Mediterranean anemia carrier and hypothyroidism. Cholecystoduodenal fistula was detected during laparoscopic cholecystectomy when the adhesion between the gallbladder neck and the postpiloric region was attempted to open. It was switched to open surgery. The duodenum was repaired. Type 2 Mirizzi syndrome was detected during cholecystectomy. Cholangiography was taken. No additional problems were observed in the biliary tract and the surgery was terminated by repairing bile duct.

**Conclusion:** Gallstone ileus is a rare cause of mechanical bowel obstruction, but it affects elderly patients with comorbid conditions. Therefore, mortality rates of the treated patients are between 5-6.7%. Ileus manifests itself as recurrent ileus episodes as stone advancing in the intestinal organ associated with cholecystenteric fistula (CEF) and ileus clinic improves when the obstruction is complete. The mean duration of hospitalization was 5 days. While 20% of these patients had acute cholecystitis, there was jaundice in less than 15% of the patients. Stone remains rarely at the CEF level and causes gastric outlet syndrome (Bouveret Syndrome). Very small stones can be removed from the digestive system without creating the ileus picture. Not observing ST in the ultrasound of the abdomen in cases with known ST, pneumobilia, bowel obstruction, and the presence of ST in the lumen of the intestine make us suspect-Rigler triad-. In the treatment of ileus, if the patient is not high-risk and there is no intense inflammatory process in the abdomen, CEF can be repaired with cholecystectomy after the abolition of the ileus by enterolithotomy or segmental resection. However, in high-risk patients, treatment with ileus may be treated in a second session. It is necessary to repair the CEF detected during the elective surgery at the same session and to eliminate the gallbladder disease. The imaging study to be performed during the surgery also helps reveal the possible ST disease.

**Keywords:** Gallstones, ileus, cholecystenteric fistula

## PP-0599 [Hepatobiliary Surgery]

# Liver Protective Effect of Calcium Dobesylate in Experimental Obstructive Jaundice

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**Objective:** Liver damage after obstructive jaundice occurs with a multifactorial and complex mechanism. Oxidative stress and inflammation are important factors affecting the degree of this damage. In this study, we aimed to investigate the protective effect of Calcium Dobesylate (Ca-Dob) with antioxidant and anti-inflammatory effect on liver injury caused by experimental obstructive jaundice model.

**Material and Methods:** Thirty Wistar Albino female rats were randomly divided into three groups. Laparotomy was performed on rats in Group 1 (Sham/n: 10), only the bile duct was dissected. Laparotomy and bile duct ligation were performed to rats in Group 2 (Control/n: 10) and Group 3 (Ca-Dob/n: 10). No other treatment was given to Group 1 and Group 2 rats. Group 3 rats were given 100 mg/kg/day Ca-Dob through orogastric tube for 10 (ten) days following the procedure. All rats were sacrificed after ten days. Blood and liver tissue samples were collected for biochemical and histopathological analyses.

**Results:** Serum liver function test values were significantly lower in the Ca-Dob group ( $p<0.05$ ). In the Ca-Dob group, the levels of malondialdehyde (MDA) and fluoroscent oxidation products (FOP) were significantly lower ( $p<0.05$ ) in liver tissue samples than the control group whereas total sulfhydryl (SH) values were significantly higher ( $p>0.05$ ). In addition, when the groups were compared in terms of histopathological score, the histopathological damage value in Ca-Dob group was significantly lower than the control group ( $p<0.05$ ).

**Conclusion:** In our study, we found that Ca-Dob significantly reduced liver function test values and oxidative stress parameters in liver tissue besides reducing inflammation and fibrosis in liver tissue with obstructive jaundice. We think that Ca-Dob may be a hepatoprotective agent because of its anti-inflammatory and antioxidant effect. We believe that our results will be supported with the studies conducted with wide case-control series.

**Keywords:** Hepatoprotective effect, calcium dobesilate, obstructive jaundice

## PP-0600 [Hepatobiliary Surgery]

# Hepatocellular Carcinoma Case Imitating Hepatic Adenoma

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Hepatocellular adenomas (HA) are rare, benign natured masses which are reported to reach tumor sizes up to 30 cm. Hepatocellular carcinomas (HCC) are the most common primary malignancies of the liver and are reported to develop usually on the basis of cirrhosis of the liver and to be more common in males. It has been reported that they present with masses that are often smaller than 5 cm and less frequently with larger than 10 cm masses. We aimed to present a case of hepatocellular carcinoma presenting with a hypodense mass of 13 cm in size, filling almost entire right lobe of the liver in the case of a 72-year-old female patient with fatigue and pain spreading to the back on the right upper quadrant; due to its histopathologic image similar to both telangiectatic variant hepatic adenoma and false diagnosis as "cavernous hemangioma" in the first biopsy specimen.

**Keywords:** Hepatocellular carcinoma, telangiectatic variant liver adenoma, liver adenoma

## PP-0601 [Hepatobiliary Surgery]

# Splenic Metastasis Due to Endometrium Carcinoma Operated with Subcapsular Hematoma: Case Presentation

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**Introduction:** Splenic metastases are rare pathologies. Splenic metastasis develops most commonly associated with lung and ovarian cancers. The metastasis due to endometrial carcinoma is very rare. We aimed to discuss the patient in whom splenic metastasis developed due to endometrial carcinoma and was operated with subcapsular hematoma.

**Case:** A 63-year-old female patient was admitted to the emergency department with the complaints of abdominal pain, nausea and vomiting. It was learned that total abdominal hysterectomy and bilateral salpingo-oophorectomy were performed due to endometrium cancer approximately 10 months before her anamnesis. Physical examination showed sensitivity on the left upper abdomen. An approximately 7 cm diameter lesion was detected in the anterior spleen in the abdominal computed tomography examination performed. There was a lesion showing irregular contrast in the spleen in contrast enhanced magnetic resonance imaging. It was stated that the lesion could be spleen hematoma and there could be metastasis. The patient was explored with the present findings. There was non-ruptured hematoma on the anterior spleen at the exploration. The massive lesion was palpated in this hematoma. Standard splenectomy was performed. Postoperative period was without any problem. Pathology result was reported as endometrial carcinoma metastasis in the spleen.

**Conclusion:** Splenic metastasis of solid tumors is rare. The most common one is hematogenous metastasis. Metastases can occur by lymphatic, transperitoneal and by way of close neighborhood. Abdominal pain and compression symptoms may be seen in these patients. However, an important part of the patients is asymptomatic and they reveal incidentally by imaging methods. The spleen rupture in these patients is a major complication. Splenic metastasis of endometrial carcinoma is uncommon. The cases reported in the literature may appear very long after the initial surgical procedure. In our case, metastasis was detected about 10 months after primary surgery. However, splenic subcapsular hematoma was primarily considered according to the patient's findings at her admission. Splenic metastasis was considered as differential diagnosis. Splenectomy is the treatment method that should be preferred in patients with splenic metastasis due to endometrial carcinoma both for treatment and prevention of complications such as splenic rupture.

**Keywords:** Endometrium cancer, splenic metastasis, subcapsular hematoma

## PP-0602 [Hepatobiliary Surgery]

# Factors Affecting the Development of Postoperative Bile Fistula in Patients with Liver Cyst Hydatid

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**Objective:** It was aimed to investigate the factors affecting the development of biliary fistulas in patients with liver hydatid cyst disease and to predict in which patient biliary fistula can form while preparing cyst hydatid patients for the operation and making a treatment and follow-up plan accordingly.

**Material and Methods:** Fifty-five patients who was operated due to cyst hydatid of the liver in our hospital between January 2016 and July 2017 were included in the prospective study. Patients were examined in terms of age, sex, size of cyst, location of cyst, number of cysts, cystic phase (gharbi classification used), comorbid disease (only DM), synchronous cyst (presence of cyst outside the liver), and preoperative albumin values. Patients were divided into two groups as patients with and without biliary fistula. All patients underwent partial cystectomy + drainage as surgical technique. Contents of all cysts were irrigated with povidone-iodine and 3% NaCl. In all cases; drain guard was placed in and out of the cyst cavity. It was routinely checked whether there was a biliary fistula in the cyst lodge. Biliary fistula test was not performed. Intraoperative bile leakages were repaired primarily. All patients were treated with albendazole (10 mg/kg/day) for 3 months postoperatively. If there is no reduction in the amount of bile released from the spontaneous drain, or if the flow rate is high, MRCP followed by ERCP (endoscopic retrograde cholangiopancreatography), in the patients for whom these were necessary, were performed. The collected data were calculated using SPSS (22.0 for Windows, SPSS Inc., Chicago, Illinois, USA). Suitability of the variables to the normal distribution was examined by the Kolmogorov-Smirnov test. Pearson Chi Square and Fisher's Exact Tests were used. A P-value of less than 0.05 was considered statistically significant.

**Results:** Of the patients included in the study, 45 (82%) of them were female and 10 (18%) were male. Their mean age was 39.3±16.6 years. 14 (25.5%) patients had biliary fistula. Fistula was removed after performing ERCP in 4 patients and it was cut spontaneously in 10 patients. The average time to ERCP was 14.25 days. Biliary fistulas were detected in per-op 5 patients and

these were closed primarily. No biliary fistula was seen in these patients in the postoperative period. Mean cyst diameter was measured as  $8,39\pm 2,87$  cm. A statistically significant relationship between the gharbi stage of the cyst and bile leakage ( $p < 0.05$ ) was detected. At the same time, the mean number of cysts ( $2,07\pm 2,16$ ) in patients with biliary leakage was found significantly higher than that in patients without biliary leakage ( $1,7\pm 0,59$ ) ( $p=0.007$ ).

**Discussion:** Biliary fistula is the most common complication after liver cyst hydatid surgery. It is reported in the literature between 2.6-28.6%. This rate is 25,5% in our series. When we look at the literature in the formation of biliary fistula; cyst size, location, cystic degenerative appearance have been reported to be effective. In our study; according to the Gharbi classification, advanced cysts and increased number of cysts were found statistically significant in the development of the biliary fistula.

**Keywords:** Cyst hydatid, biliary fistula, liver, biliary leakage

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## PP-0603 [Hepatobiliary Surgery]

# A Rare Cause of Pneumobilia: Papilla Opening Anomaly and Dysfunctional Oddi Sphincter Coexistence

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**Introduction:** The presence of air (pneumobilia) in bile ducts can occur in cases such as bilioenteric fistula, bilioenteric anastomosis, emphysematous cholecystitis, dysfunctional oddi sphincter and sphincterotomy. Under normal conditions, the choledoch is opened to the second part of the duodenum and rarely it can be opened to the first part of the duodenum. We aimed to present pneumobilia coexistence with papilla anomaly in our case.

**Case:** A 51-year-old male patient was admitted to the emergency service with a complaint of abdominal pain. Abdominal pain was about 1 day and it was localized and continuous in the upper right quadrant. Fever among vital findings was  $37,7^{\circ}\text{C}$ . Physical examination revealed tenderness and defense in the right upper quadrant. The laboratory parameters were as such; white blood cell count:  $14900/\text{mm}^3$ , C-reactive protein (CRP)  $10,9$  mg/l, total bilirubin  $3,82$  mg/dl, direct bilirubin  $2,89$  mg/dl, ALT  $234$  U/AST:  $169$  U/L, LDH:  $224$  U/L. Hepatocellular ultrasound performed was interpreted as; bile wall had distant view, wall thickness was normal, wall was regular, lumen had compatible appearance with intensive bile content, pericholecystic fluid was not observed, diameter was  $9$  mm at the choledochic site and increased, air densities in intrahepatic bile ducts and choledoch were observed, appearance was suspicious in terms of choledocholithiasis and spontaneous stone passage. In the abdominal computed tomography; bile duct had a distended appearance (cholecystitis?) and was dilated in intrahepatic bile ducts. The patient was hospitalized with physical examination and laboratory parameters and cholecystitis diagnosis and medical treatment was started. The patient was consulted for gastroenterology in the external center and ERCP (endoscopic retrograde cholangiography) was decided to perform. It was determined that there was an apical narrowness in ERCP and the papilla of Vater was opened to the first part of the duodenum (bulbus). The largest portion of the choledochus was found to be  $12$  mm and the intrahepatic bile ducts were apparently wider on the left. Sphincterotomy was not performed in the patient because the vater of ampulla sphincter tonus was little and biliary sludge in the choledoch was swept by stone balloon. Laparoscopic cholecystectomy was performed after the procedure without any complication during ERCP. The complication did not develop in the per-operative period and the patient was discharged on the first postoperative day.

**Conclusion:** It is very rare that both the odd sphincter tonus is reduced (dysfunctional odd sphincter) and the anomaly of papilla opening together with many reasons for air in the bile ducts. Presence of cholecystitis picture together with these two findings in our case made us consider the emphysematous cholecystitis and the picture of bilioenteric fistula before performing ERCP. The detection of anomalies of the papilla opening with ERCP and removing the biliary sludge in choledoch made cholecystectomy under elective conditions safer. We are of the opinion that anomaly of papilla opening and dysfunctional oddi sphincter in the presence of pneumobilia should always be kept in mind and imaging bile ducts with interdisciplinary approach before the surgery would facilitate diagnosis and thus prevent possible morbidity and mortality and make safer surgical intervention.

**Keywords:** Opening anomaly of vater of papilla, pneumobilia, acute cholecystitis, ERCP, dysfunctional oddi sphincter

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## PP-0604 [Hepatobiliary Surgery]

# Mixed Adenoneuroendocrine Carcinoma with Distal Choledoch Location

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**Introduction:** Mixed adenoneuroendocrine carcinoma (MANEC) is a rare pathology and is diagnosed by immunohistochemical examination. In the literature, case presentations and rarely series have been published. Due to the rarity of the treatment, the treatment recommendations still vary according to the various authors and the place of location. One of the two most important diagnostic criteria is that each component constitutes at least 30% of the tumor and both components are malignant. The biliary location is very rare, and the number of studies reporting distal choledochus placement is only a few. We aimed to present the pathological diagnostic features, surgical treatment and follow-up parameters of this rare tumor with a patient who had a diagnosis of MANEC with distal choledoch localization.

**Case:** A 70-year-old male patient was admitted to the clinic with dyspepsia, nausea and weight loss. Following radiological studies and laboratory findings, a mass with malignant features of the distal choledoch was observed. Pancreaticoduodenectomy was performed following preoperative preparations. Histopathological examination showed that the mass was consistent with the mixed adenoneuroendocrine tumor. The adenocarcinoma component was well differentiated and neuroendocrine component constituted more than 30% of the tumor and had grade 1 features. The tumor was accepted as pT2 and perineural, intraneural and lymphovascular invasion was observed. Surgical margins were negative. The patient was discharged without any complications on postoperative 14th day. The patient received postoperative short-term adjuvant chemotherapy and continued to be followed without any recurrence at the 26th postoperative week.

**Conclusion:** MANEC is a very rare diagnosis and was defined by the World Health Organization in 2010 as neoplasms containing epithelial and neuroendocrine components. Cordier was the first researcher to define as a two-component gastrointestinal tumor in 1924. To date, MANECs have been shown in various localizations in the literature and the cases of distal choledoch is still a few. Unlike the literature in our case, metastasis was not observed in the liver. Although it has been 100 years since its first diagnosis, it has been still undefined and there are controversial findings due to its low incidence.

**Keywords:** Choledochal tumors, MANEC, mixed adenoneuroendocrine carcinoma, MINEN

## PP-0605 [Hepatobiliary Surgery]

# Migration of the Pancreaticojejunostomy Stent to the Biliary System; a Rare Complication of Pancreaticoduodenectomy and its Non-Operative Treatment

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**Introduction:** Pancreaticoduodenectomy (PD) is a complex procedure involving three separate anastomoses. Placement of stent to the pancreatic canal is thought to be useful in maintaining anastomotic safety and continuity. Although it is an effective choice, the procedure has various complications and migration of pancreatic stent to the biliary system can be rarely observed. In this case, we aimed to present the migration of placement of stent preoperatively to hepaticojejunostomy (HJ) anastomosis.

**Case:** The patient was a 37-year-old woman who underwent Whipple procedure due to pancreatic head cancer two years ago. Pathologic examination was consistent with adenocarcinoma and the surgical margins were clear. Short-term chemotherapy was applied postoperatively. She was admitted to the outpatient clinic with the complaint of jaundice. Bilirubin levels were high in the laboratory findings (total 12.6, direct 11.3). Computerized tomography with intravenous contrast showed that the pancreaticojejunostomy (PJ) stent migrated to the HJ anastomosis site. After consultation with the interventional radiology department, a right posterior bile duct was entered and hepaticojejunostomy stricture was expanded with balloon dilatation and the stent was pushed into the small intestine with calculus. After one week no bile duct dilatation was observed and bilirubin levels began to decline.

**Conclusion:** Pancreaticojejunostomy stent placed during the Whipple procedure is the standard method for many surgeons to prevent anastomotic leaks. However, many studies published in the literature show various complications of the stent including migrations. Stent migration is most common in the small intestine. Rarely, PJ stents can be delivered to the biliary system via choledochoduodenostomy. In our case, the stent reached the HJ area, leading to local inflammation and consequent stenosis, causing obstructive symptoms such as icterus. Although migration of surgically inserted internal stents is rarely reported in this way, it should be kept in mind in patients who develop icterus postoperatively, and non-operative treatment methods should be tried first.

**Keywords:** Pancreatic stents, pancreaticoduodenectomy, stent migration

## PP-0606 [Hepatobiliary Surgery]

# Fuzzy Mathematical Model in the Risk Assessment of Postoperative Complications and Selection of Individual Surgical Tactics in Patients With Obstructive Jaundice

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**Introduction:** There are various opinions with regard to choosing an appropriate surgical tactics when treating obstructive jaundice, and postoperative complications and high mortality caused by this pathology require close attention by the specialists.

**Aim:** Creation of a fuzzy logic model to predict the risk of postoperative complications and to select an individual optimal surgical approach and the evaluation of its clinical efficiency in obstructive jaundice caused by choledocholithiasis.

**Material and Methods:** Clinical efficacy of the original mathematical model that we created based on the Lutvi-Zad's fuzzy logic theory was studied in 150 patients with obstructive jaundice. By selecting seven criteria of a greater prognostic significance affecting the postoperative complications, their linguistic indicators were evaluated, and based on the scheme of the phase logic output, the following sequences were defined for all fuzzy input and output variables: X1, patient's age {«middle» (up to 60 years), «old» (more than 60)}; X2, duration of jaundice {«short» (1–7 days), «little» (8–14 days), «much» (15–21 days), «more» (more than 21 days)}; X3, temperature {«normal» (37.0°C –38.0°C), «high» (38.1°C –39.0°C), «higher» (more than 39.0°C)}; X4, comorbidities {«compensation» (0), «subcompensation» (0,5), «decompensation» (1,0)}; X5, the level of liver dysfunction {«I<sup>o</sup>» (total bilirubine up to 50 mcml/l), «II<sup>o</sup>» (50–100 mcml/l), «III<sup>o</sup>» (100–200 mcml/l), «IV<sup>o</sup>» (more than 200 mcml/l)}; X6, CD4<sup>+</sup> in the blood {«low» (more than 25%), «middle» (17.0%-25.0%), «high» (up to 16%)}; X7, interleukin-2 in the serum {«low» (more than 35.0 pcq/ml), «middle» (25.0–35.0 pcq/ml), «high» (up to 25.0 pcq/ml)}; Y, level of risk {«low» (0.0–0.49), «suspicion» (0.5), «high» (0.51–0.8), «higher» (0.8–1.0)}.

The values of input variables were introduced into the model and transformed in the "Phaser" block. The seven input and one output variables using the FUZZY LOGIC sub-system of the MATLAB TOOLBOX software are connected with the fuzzy logic model.

**Results and Conclusion:** (1) The risk is absent or low: (A) (Y=0.0–0.49), an unambiguously one-stage approach is used; (2) suspected risk: (B) (Y=0.5), if the risk assessment in the dynamics after the preoperative therapy decreases, then use tactics A; if the score does not decrease or increase, use tactics C; (3) high risk (Y=0.51–0.8) and very high risk (Y=0.81–1.0): (C) A multi-stage surgical approach is used.

According to the defined level of risk, in 92 patients, a one-stage procedure was used, while 58 underwent a two-stage procedure. In these patients, the rate of postoperative complications was reduced to 4.7% and mortality rate to 1.3% due to the optimization of surgical tactics.

Thus, the proposed model specifically allows to evaluate the degree of risk of postsurgical complications, select individual surgical tactics, and significantly improve treatment results for each patient.

## PP-0607 [Hepatobiliary Surgery]

# ERCP-Associated Periapillary Retroperitoneal Choledochal Perforation: Two Case Reports

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**Introduction:** Endoscopic retrograde cholangiography (ERCP) is a method for the treatment of obstruction and the imaging of the bile duct and pancreatic duct. It is the most frequently used diagnosis and treatment method in both benign and malignant obstructive icterus. It is a procedure that has serious complications as well as being an advanced diagnosis and treatment method. When the literature is examined, morbidity rates of up to 10% and mortality rates of up to 1% are observed. Complications such as pancreatitis, hemorrhage, and cholangitis are common after ERCP procedure. Perforation is a rare but most feared complication and most commonly associated with mortality. In this study, we aimed to present two patients with periampullary retroperitoneal perforation after ERCP with literature.

**Case 1:** A 53-year-old female patient was admitted to the emergency service with a right upper quadrant abdominal pain complaint. WBC and Hgb were monitored in the normal range in laboratory evaluation at the time of admission. ALP 359 U/L and GGT 455 U/L and normal and direct bilirubin were found between normal limits. The patient was hospitalized in the gastroenterol-

ogy department upon observing stone in bile duct lumen and stenosis in distal choledoch in abdominal USG. Stenosis in distal choledoch was observed in the patient who underwent ERCP.

Minimal hemorrhage was observed in the patient who underwent EST after sweeping with balloon. After the adrenaline injection hemorrhage control of the patient was provided, increase of Wbc and CRP was observed and defense and rebound in all quadrants, being especially evident in the right quadrant, were positive in the abdominal examination.

The whole abdominal CT revealed free air prominently in the paraduodenal and subhepatic area, and free fluid between the pelvis and the bowel loops. Considering perforation, the patient was performed laparotomy. The hepatoduodenal ligament was explored. The choledoch was suspended. After duodenum coherization, periampullar posterior choledochal perforation was observed. T-tube was placed by performing choledochotomy. The operation was terminated. In the follow-up, the patient had no additional pathology and was discharged on the 21st postoperative day after removing t-tube catheter.

**Case 2:** A 79-year-old female patient underwent ERCP in the gastroenterology department upon observing choledochal 15mm dilated lesion consistent with stone in the lumen in USG and MRCP reports of. Stone extraction by sweeping with balloon in ERCP and EST were performed. Patient with abdominal pain finding in the physical examination underwent acute abdominal CT and it revealed free air in paraduodenal region and then was consulted to our clinic. Retroperitoneal periampullary choledochal perforation was observed at the exploration of the patient who had undergone operation with the prediagnosis of perforation. We performed a choledocotomy after primary repair and placed a T-tube. The patient whose T-tube was removed on the postoperative 21st day was discharged with healing.

**Conclusion:** Perforations caused by ERCP are known as Howard classification. Type 1 is papillary distant duodenal perforation, type 2 is periampullary perforation and type 3 is guide wire perforation. Early diagnosis and treatment is life saving. Otherwise mortality rates associated with biliary peritonitis and sepsis is quite high. For type 1 perforations, surgical intervention should be performed as in the upper GIS perforation. Biliary diversion and biliary drainage should be performed in type 2 and type 3. T-tube drainage, drainage gastrostomy and duodenostomy applications and nutritional jejunostomy opening are among the methods to be applied according to the localization of the perforation.

**Keywords:** ERCP, choledoch, perforation

## PP-0608 [Hepatobiliary Surgery]

# Association Between Forms of Inflammation and Antimicrobial Peptides in Acute Calculous Cholecystitis

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**Introduction:** In any inflammatory process, regardless of the cause, cytokines and antimicrobial peptides (AMP) play the major role. Although the cytokine profile in the acute calculous cholecystitis has been studied, AMP has not been studied sufficiently.

**Aim:** To study the relationship between the forms of inflammatory and AMP in acute calculous cholecystitis.

**Material and Methods:** The study was carried out on 69 patients who underwent surgery due to catarrhal (26 patients), phlegmonous (24 patients), and gangrenous (19 patients) cholecystitis. The  $\alpha$ -defensin (HNPa) and endotoxin levels in blood serum were identified by the IFA method ("Hycult Biotech" kit), the bactericidal-permeability-increasing (BPI) protein by BPI-IFA-BEST ("Vector-Best"), and hepsidine by the direct IFA method. Neutrophil elastase (NE) and lactoferrin (LF) have also been studied in patients. The indicators of 10 healthy individuals were taken as a norm.

**Results:** Generally, in the preoperative period, compared with norm, the concentration of HNPa in blood significantly increased 2.4 times; BPI, 6.9 times; endotoxin, 8.6 times; NE, 3.2 times; LF, 2.2 times; and hepsidine, 3.5 times. Further studies have shown the interaction between AMP and morphological forms of inflammation in the blood. The HNPa blood levels were  $162.1 \pm 6.6$  ng/ml in the catarrhal form;  $216.5 \pm 10.7$  ng/ml in the phlegmonous form; and  $344.1 \pm 11.6$  ng/ml in the gangrenous form of acute calculous cholecystitis. Similar analogs have also been found for other AMPs. In patients with a gangrenous form of acute calculous cholecystitis, the level of BPI protein, endotoxin, NE, LF, and hepsidine in blood compared with catarrhal and phlegmonous forms was higher 3.5 times ( $P_1 < 0.001$ ) and 16.5% ( $P_2 < 0.05$ ); 2.1 times ( $P_1 < 0.001$ ) and 38.2% ( $P_2 < 0.001$ ); 90.3% ( $P_1 < 0.001$ ) and 42.7%; 68.9% ( $P_1 < 0.001$ ) and 37.9% ( $P_2 < 0.001$ ); and 54.4% ( $P_1 < 0.001$ ) and 37.7% ( $P_2 < 0.001$ ), respectively.

**Conclusion:** (1) In patients with acute calculous cholecystitis, the level of AMP concentration in the blood directly depends on the morphological form of inflammation.

(2) AMP indicators can be used as informative biomarkers in early diagnosis of destructive forms of acute calculous cholecystitis.

## PP-0609 [Hepatobiliary Surgery]

# The Importance of Biomarkers in the Early Diagnosis of Destructive Cholecystitis

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**Introduction:** The early diagnosis of acute calculous cholecystitis (ACC), which is included in the wide practical area of modern diagnostic agents, is actual. Therefore, delayed diagnosis of acute cholecystitis causes destruction in the gallbladder, some dangerous complications and even death. In this regard, biological markers like inflammatory processes have high sensitivity and include acute phase proteins (APP)

**Objective:** To investigate the clinical importance of C-reactive protein (CRP) and ferritin in early diagnosis in the destructive forms of APP ACC.

**Material and Methods:** In the study, 37 patients operated for the diagnosis of ACC were examined. The patients were divided into 3 groups by considering the clinical and morphological form of ACC: Group I - cataract form (12 patients); Group II - phlegmonous form (14 patients), and Group 3 with gangrenous patients (11 patients).

**Results:** Generally in all patients, preoperative plasma values of CRP was  $8,5 \pm 0,7$  mg/l (2,4 times higher than in healthy individuals;  $p < 0,001$ ) and ferritin level was  $327,8 \pm 16,8$  ng/ml (2,4 times higher than normal,  $p < 0,001$ ). Further studies have revealed the direct relationship between the morphologic form of inflammation in the gallbladder and both APPs in the plasma. The highest levels of CRP and ferritin were  $16,3 \pm 1,4$  mg/l (norm  $3,5 \pm 0,4$  mg/l) and  $520,0 \pm 34,2$  ng/ml (norm -  $136,1 \pm 8,1$  ng/ml) in the ACC gangrenous form. The levels of CRP and ferritin in the plasmide inflammation in the gallbladder were  $12,4 \pm 1,1$  mg/l and  $438,1 \pm 20,2$  ng/ml, respectively. The lowest level of both biomarkers was detected in the catarrhal form of ACC: CRP -  $6,1 \pm 0,8$  mg/l and ferritin -  $262,9 \pm 11,6$  ng/ml.

**Conclusion:** According to the obtained data, CRP and ferritin represent the morphological form of the inflammation in the gallbladder and they can be used as informative biomarkers in the early diagnosis of destructive forms.

**Keywords:** Acute calculous cholecystitis, C-reactive protein, ferritin

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## PP-0610 [Hepatobiliary Surgery]

# Coexistence of Synchronous Ampullary Adenocarcinoma and Liver Hepatocellular Carcinoma

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Ampulla of Vater adenocarcinoma is rarely found in periampullary regional tumors. It causes obstruction of the bile duct due to localization and thus early diagnosis is made. Although there are minimal invasive approaches such as local excision for treatment, the gold standard is pancreaticoduodenectomy. Hepatocellular carcinoma is the most common primary malignant tumor of the liver and its incidence is between 20-200/100,000. A 62-year-old male patient presented with a jaundice, which occasionally disappeared. The biopsy performed from the lesion having malignant appearance in ampulla was reported as ampulla adenocarcinoma in the gastroscopy performed. Tumor markers were normal and the patient was operable in preoperative imaging studies and distant metastasis was not observed. In laparoscopic exploration, a 2 cm diameter mass was observed in segment 3 of the liver. Frozen was sent. It was stated to be consistent with hepatocellular carcinoma. Then a laparoscopic Whipple procedure was conducted and a segmental liver resection was performed. He was discharged without any problems on the 5th day after surgery. Pathology result was reported as ampullar adenocarcinoma T2N0 and moderately differentiated hepatocellular carcinoma. We aimed to present the coexistence of ampullary adenocarcinoma and hepatocellular carcinoma which have not been previously reported in the literature.

**Keywords:** Ampulla of Vater adenocarcinoma, hepatocellular carcinoma, laparoscopy

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## PP-0611 [Hepatobiliary Surgery]

# Postpartum Spontaneous Choledochal Perforation

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Spontaneous choledochal perforation is a rare condition in adults and may lead to biliary peritonitis. Cholelithiasis, choledochal cysts, and tumor obstruction of ampulla are among the etiological factors that are accused. Development of spontaneous choledochal perforation is rare in adults without etiological factors and is limited to only a few cases in the literature. Biliary system stone diseases are the second most common cause of non-obstetric cases requiring surgical interventions in pregnant. 60-70% of the patients are asymptomatic. Biliary colic is seen at a rate of 1%. Choledochal stone is a rare condition in pregnancy and is seen in 10% of pregnant patients who underwent cholecystectomy. 7-10% of jaundice in pregnancy is due to choledochal stone. It has been shown that there was biliary sludge in ¼ of the pregnant patients and gallstone in 5% of them in postpartum period. The frequency of gallstone formation increased within 5 years. Our case who was a post-partum female patient, after preterm labor at the age of 17, was operated with acute abdominal picture and perforation was seen in the posterior part of the distal choledoch. Cholecystectomy, primary repair of choledoch and T-tube drainage from the perforation region were performed. ERCP was applied with T-tube 2 weeks later. Then T-tube was withdrawn after 6 weeks. The patient was discharged with healing.

**Case:** A 17-year-old female patient was referred to the general surgery department for complaints of abdominal pain, nausea and vomiting that started suddenly on postpartum day 1 after preterm labor. Physical examination of the patient with no systemic comorbidities showed extensive defenses and rebound. There was no significant laboratory finding other than leucocytosis (19.500 gr/dl) and hyperamylasemia (365 U/L). Abdominal ultrasonography (USG) and computerized tomography (CT) revealed that the bile duct was hydropic and pericholecystic, peripancreatic fluid was present. It was evaluated as acute cholecystitis or bile duct perforation with imaging methods and laboratory tests. The patient, whose clinical findings did not regress in her follow up with conservative treatment, was taken to the operation urgently. In laparotomy, fluid with intense bile was present in the abdomen especially in the subhepatic area. It was observed that the sac was hydropic, and the stone was not palpable. A 1 cm perforation area was detected in the posterolateral part of the distal choledoch at the exploration site. After the cholecystectomy was performed, the choledoch is irrigated with isotonic solution and the transition to papilla was controlled. No choledochal stone, papilla stenosis, choledochal cyst or pancreatic mass were detected. Primary sutures were placed in the perforation area, T-tube drains were applied into the choledoch, and the lodge was drained. Postoperative biliary leakage was not seen. She was referred to a center where Ercp was performed on the postoperative 14th day. The patient's T-tube was removed 4 weeks after Ercp. The patient was discharged with healing.

**Keywords:** Postpartum, choledoch, spontaneous, perforation

## PP-0612 [Hepatobiliary Surgery]

# New Technique at Left Side Localized Gall Bladder: Cutting of Falciform Ligament

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A true left-side localized gall bladder is a congenital condition in which the gall bladder is located in the left side of falciform ligament without situs inversus that is often overlooked in preoperative studies. Coincidental encounter with this situation and co-existence of other anomalies such as portal vein and biliary system anomaly invites complications during the operation. For this reason, we present a new technique to reduce the difficulties in laparoscopic surgery of the left-side localized gall bladder and to provide a good working environment. 70-year-old female patient was admitted to the emergency service with the complaints of abdominal pain, nausea-vomiting, and elevated liver function tests. There was murphy positive and epigastric tenderness in physical examination. It was observed in preoperative ultrasonography and Magnetic Resonance Cholangiopancreatography (MRCP), that there were many millimetric stones in the gall bladder, the gallbladder wall was edematous and common bile duct and choledoch diameter were normal. The operation was planned considering the clinical findings of the patient. Laparoscopic exploration revealed a true left-side localized gallbladder. After the resection of the falciform ligament, there was a sufficient angle of view and a dissection environment for the calot dissection. The operation was completed smoothly.

The incidence of left-side localized gallbladder in the literature is 0.6% and this incidence is expected to increase with advances in imaging methods. However, as in our case, most cases arise randomly. It is reported in the literature that complete or partial situs inversus, portal venous-biliary system anomalies and liver hepatic segment 4 atrophy can accompany this condition. Portal vein anomalies may be a problem during liver resection, such as in liver transplant and tumor surgery, but it is less important in laparoscopic cholecystectomy. Positional difficulties and systemic anomalies are problems for laparoscopy. Numerous techniques and modifications have been described in the literature to overcome these difficulties. First, it is proposed to take a "mirror image" of the image in an optical camera. However, this change does not bring anatomical convenience, although it provides the advantage of the image. Other suggestions were the use of additional trocars or the replacement of existing trocars (especially using subxiphoid trocars). In our case, the falciform ligament was excised after bringing the patient to the upper left position using the classical trocar positions. As a result, the gall bladder was located at segment 5 position of the liver. The view angle was provided for the dissection of the calot and the mobility of the sac increased. The operation was carried out safely. This change has not been reported previously in the literature.

**Keywords:** Left-sided bile duct, sinistroposition, anomaly, laparoscopic cholecystectomy

## PP-0613 [Hepatobiliary Surgery]

# Pericoledocal Tuberculous Lymphadenitis

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**Introduction:** We aimed to present a rare case of obstructive jaundice confused with malignancy.

**Case:** A 74-year-old male patient was admitted to the emergency unit with abdominal pain complaint. Ultrasonography (USG) and computed tomography (CT) showed narrowing of the choledoch distal. He was hospitalized because of elevation of liver and cholestasis enzymes (direct bilirubin: 10.43 mg/dl). CA19-9: 132.7 U/ml was detected. Magnetic resonance cholangiopancreatography (MRCP) and triphasic CT revealed a 39x34x44 mm lesion surrounding the hepatic artery in anterior of choledoch. Trucut biopsy performed with USG was reported as a lymphoid cell. It was detected in laparotomy that there was intensive fibrosis in the hepatoduodenal ligament. The choledoch could not be isolated. The mass was thought to be unresectable and an incisional biopsy was performed from the neighboring lymph node. Non-necrotizing granulomatous lymphadenitis was observed in the pathology. In the postoperative period, endoscopic retrograde cholangiopancreatography (ERCP) was performed due to obstructive jaundice, and the patient underwent a brush biopsy by placing internal stent in choledoch. Malignancy and acid-resistant bacteria (ARB) were negative in cytology. Triple tuberculosis therapy was started in the patient having Quantiferon (+) in the blood with the consideration of chest diseases department as extrapulmonary tuberculosis. Six months later, CT showed a significant decrease in the size of the mass and ERCP showed improvement in the stenosis of the choledoch and stent was withdrawn. At this moment the patient has completed the 9 month tuberculosis treatment and moving on smoothly.

**Conclusion:** Abdominal tuberculosis (ATB) accounts for 12-25% of extrapulmonary tuberculosis cases. Localized peripancreatic lymph nodes constitute approximately 13% of ATB. Secondary inflammation due to periportal lymphadenitis may lead to narrowing in the common bile duct. Patients present with jaundice. Like most cholangiocarcinomas, they are confused with malignancies. The preoperative diagnosis is difficult and the operation is often necessary. Tuberculosis should be kept in mind when there is no suspicious diagnosis.

**Keywords:** Tuberculous lymphadenitis, obstructive jaundice, malignancy

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## PP-0614 [Hepatobiliary Surgery]

# Comparison of Ranson Score and AAST in Determining Severity of Acute Pancreatitis at Admission

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**Objective:** To compare the Ranson score and the degree of AAST in assessing the severity of illness at admission in patients with acute pancreatitis.

**Material and Methods:** Sixty patients, whose AAST (American Association for the Surgery of Trauma) degree and Ranson Score could be calculated, were included in the study from 121 patients who were admitted to the Ankara Numune Education and Research Hospital General Surgery/Emergency Surgery Department between 1st January 2013 and 30th of December 2017. Parameters for Ranson score of patients were obtained from laboratory data and clinical, imaging, operative and pathologic findings of four different criteria required for AAST were obtained from electronic records retrospectively.

**Results:** The median age of these 60 patients was 64 (Min: 21-Max: 90). Of the patients included in the study, 34 (56.7%) were female and 26 (43.3%) were male. 53 (88.3%) of the patients were discharged and mortality developed in 7 (11.7%) patients. Median Ranson score was 2 and AAST grade was 2 in patients who developed mortality. In the Receiver Operative Characteristic (ROC) analysis, the area under the curve was 0,652 for AAST and P=0,193 and it was 0,598 for Ranson and P=0,401. HosmerandLemeshowTest (Qualification test) was P=0.991.

**Conclusion:** The adequacy of the management of acute pancreatitis is associated with overall clinical recovery and reduction in overall mortality rates in these patients. Estimates of the severity of acute pancreatitis are limited in each of the AAST and Ranson scores. Moreover, they are dependent on laboratory values and may require up to 48 hours to fully predict the assessment of the severity. However, anticipating the severity of pancreatitis at the time of admission and planning the treatment accordingly have vital importance for the clinician in the cases with severe acute pancreatitis. Because as the severity of pancreatitis increases, the mortality rate increases in correlation with it. Therefore, there is a need for a practical and ideal scoring system that can assess the severity of acute pancreatitis at the time of admission.

**Keywords:** Acute pancreatitis, pancreatitis severity, scores

## PP-0615 [Hepatobiliary Surgery]

## Laparoscopic Liver Segment 3 Resection

**Mehmet Fatih Korkmaz, Ahmet Arslan, Ömer Faruk Can, Ömer Faruk Aydoğan, Mehmet Uzun***Department of General Surgery, Firat University School of Medicine, Elazığ, Turkey***Objective:** We aimed to share our experience of laparoscopic approach to liver metastasis of a patient who had been operated 2 years ago due to colon malignant neoplasm.**Introduction:** Dynamic blood CT performed at the patient's control revealed metastasis in segment 3 of the liver. The patient was directed to our clinic following neoadjuvant chemotherapy.**Material and Methods:** The patient was in the reverse telendelenburg position, the surgeon worked between the patient's legs and the camera assistant was on the left side of the surgeon. It was entered to abdomen from umbilicus 2 cm superior via optical trocar with 0° telescope. Pneumoperitoneum was formed with 14 mmHg CO<sub>2</sub>. Two trocars were placed 5 mm from the right lateral side of the camera port and 11 mm from the left lateral side. A 3 cm malignant lesion was seen in segment 3 at the exploration performed. After the resection borders were marked with hook, resection was started with bipolar energy device. The areas where vascular structures were intense were resected with stapler using 2 white cartridges. Bleeding areas were controlled by laparoscopic bipolar device and hook. The resected part was taken into the specimen bag and taken out of the abdomen through the 11 mm trocar site. One Jackson-Pratt drain was placed in the resection area. Drain was removed and the patient was discharged on the second postoperative day. As a result of pathological evaluation it was stated that the mass was adenocarcinoma metastasis in a weight of 52 gr. The patient's follow-up without recurrence continues in the postoperative fourth month.**Conclusion:** We believe that laparoscopy should be considered because of the known benefits of minimally invasive surgery for colon malignant neoplasm metastases.**Keywords:** Liver, laparoscopy, resection, tumor

## PP-0616 [Hepatobiliary Surgery]

## Ectopic Opening of the Choledoch and Coexistence of Bile Duct Dilatation and Hepatolithiasis

**Gökhan Gökten, Özgür Sevim, Zafer Ergül, İsmail Oskay Kaya***Department of General Surgery, Ankara Dışkapı Yıldırım Beyazıt Training and Research Hospital, Ankara, Turkey***Introduction:** Although choledochal ectopic opening is uncommon, ectopic opening of it to stomach, pilor and bulbus and frequently to the 3rd and 4th parts of duodenum is possible. Ectopic opening of choledoch to bulbus and coexistence of dilatation of intrahepatic bile ducts and hepatolithiasis has been an interesting case. In this study, we present a case who underwent left hepatectomy due to intrahepatic bile dilatation hepatolithiasis and frequent cholangitis attacks and who had ectopic choledochal opening.**Case:** Physical examination was normal in the examinations performed in 35-year-old female patient, who had recurrent attacks of cholangitis. There were fusiform-saccular shaped dilatations in the intrahepatic bile ducts and the cystic duct and millimetric stone echoes in these dilatations in the patient's ultrasound whose liver function tests and cholestasis enzymes were normal. Upper abdominal MR examination revealed dilated intrahepatic bile ducts, and millimetric hypointense features in the intrahepatic bile ducts. MRCP showed dilatation in the intrahepatic bile ducts. Left hepatectomy was planned due to dilatation in the left dominant intrahepatic bile duct and hepatolithiasis. There were adhesions between the inferior part of the liver, gall bladder, duodenum and stomach and these adhesions were separated with sharp dissection. Right-left hepatic artery, right-left portal vein was revealed, but it was observed that choledochus was not adjacent to these structures. It was seen that the choledochus was one of the structures thought to be adhesion between the gall bladder and the bulbus and opened to the bulbus apex. Intraoperative duodenoscopy revealed intraluminal pathology at the site of opening, duodenotomy was performed and a 3 cm diameter lesion was removed with wedge resection. The frozen examination came as ectopic stomach tissue. The operation was completed in accordance with the procedure. The patient was discharged with healing on the postoperative 12th day.**Conclusion:** Although the etiology of bilateral opening anomalies is not yet known, it is thought to be the result of an error that occurs during embryonic development. Biliary system disorders can occur as in the majority of patients having anomaly of biliary system opening, as in our case. It has been reported in the literature that ectopic choledochal opening was detected in cases hospitalized due to cholangitis, and colodolithiasis. In our case, there were recurrent cholangitis attacks. It should be kept in mind that there may be anomalies of biliary tract in the researches about biliary system disorders. In a study conducted in patients undergoing duodenal stenosis-induced endoscopy, it was observed that choledoch opened to bulbus at a rate of 77.1%

and coexistence of ectopic choledoch opening and choledocoele has been reported in the literature. In our case, intrahepatic bile duct dilatation and hepatolithiasis were detected. We think that intrahepatic biliary duct dilatation is due to the ectopic expansion as a mass with protuberating lumen to the bulbus and the coexistence of hepatolithiasis makes the case interesting.

In conclusion, we suggest that the surgical planning for diseases of the bladder system should be carried out keeping in mind that the biliary system anomalies are frequently encountered and that the anomalies that have not been defined before can be coexistent.

**Keywords:** Hepatectomy, choledoch, bulbus

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## PP-0617 [Hepatobiliary Surgery]

# Removal of Stones in the Abdomen in Laparoscopic Cholecystectomy with Newly Developed Aspirator

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**Objective:** Gall bladder perforation and scattering of stones in the abdomen during laparoscopic cholecystectomy are more frequent than open cholecystectomies (6-40%). Scattered stones can be cleaned with endoscopic bowel clamps or aspirators, but in most cases stone baskets are needed. Our aim in this presentation is to introduce the easy aspiration technique with the newly developed wide end aspirator of large sized (5-10 mm) stones scattered in the abdomen, which cannot be aspirated with standard aspirators.

**Explanation of Video Content:** With the aid of a large lumen aspirator device large enough to be able to enter from a 10 mm trocar, the gall bladder lodge is irrigated with abundant isotonic liquid and then the stones are aspirated without breaking up the stones. With this method, multiple stones which are annoying after being spread in the abdomen and cannot be aspirated frequently with standard aspirators and overlooked at a rate of 40% can be easily aspired.

**Results:** When the gall bladder is perforated, gallstones in the sac can be spread in the abdomen. It has been determined in the studies performed that only 63% of the stones in the abdomen can be removed. In our technique, we think that this ratio is drastically reduced. These forgotten stones can lead to infection and abscess, fibrosis, adhesions, fistulas, ileus, or common septicemia. However, in case of gall bladder puncture or stone presence in abdomen, immediate open cholecystectomy should not be considered. In such a case, effective antibiotics should be applied to the bile ducts during surgery, the stones should be cleaned and washed with serum in abundant amounts. Thus, these complications can be reduced as much as possible.

**Conclusion:** The spread of multiple stones in the abdomen due to gall bladder perforation during laparoscopic cholecystectomy may be annoying, but the stones that cannot be aspirated and remained in the abdomen can cause serious acute and chronic complications. We think that operation time and complications can be reduced with our new aspiration technique.

**Keywords:** Cholelithiasis, laparoscopic cholecystectomy, perforation

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## PP-0618 [Hepatobiliary Surgery]

# Gall Bladder Adenomyomatosis: 6-Year Case Analysis

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**Objective:** Gall bladder adenomyomatosis is an acquired and benign lesion characterized histopathologically by epithelial, mucosal and muscular hypertrophy. Ultrasonography is usually the preferred imaging method and allows accurate diagnosis. In this study, we aimed to determine the incidence of adenomyomatosis, associated pathologies and sensitivity of diagnostic methods in cholecystectomies performed in our clinic for 6 years.

**Material and Methods:** The pathology results of cholecystectomies performed in our clinic between October 2010 and November 2016 were retrospectively analyzed and 35 patients who were reported as "Adenomyomatosis" were included in the study. Patients were evaluated according to gender, age, admission complaint, imaging examination results, findings during surgery, pathology reports and presence of additional pathology.

**Results:** 3416 cholecystectomies were performed between the dates specified in our clinic. Pathological findings consistent with adenomyomatosis were found in 35 of them (1.02%). Twenty-five of the patients were female (71.4%), 10 were male (28.5%) and the mean age was 52.05 (23-78 years). Twenty nine patients (82.8%) had abdominal pain, 23 patients (65.7%) had dyspeptic complaints, and 3 patients (8.5%) had no complaints. When preoperative examinations were examined, ultrasonography showed calcification in 27 patients (77.1%), polyp in 4 (11.4%), adenomyomatosis in 2 (5.7%) and increase in echogenicity in 1 (2.8%). Only 5 patients (14.2%) received preoperative adenomyomatosis diagnosis. Of these, 3 had no preoperative complaints; one of the other 2 patients presented with abdominal pain and the other with itching. Adenomyomatosis was seen in US performed due to hepatitis-B in one of the patients who did not have any complaint. Another patient had adenomyomatosis at check-up. Adenomyomatosis was detected in the specimen in cholecystectomy performed upon detecting cholelithiasis at the same time in the examinations before the planned splenectomy due to idiopathic thrombocytopenic purpura of the third patient. Acute cholecystitis history was recorded in 3 patients (8.5%), biliary pancreatitis in 2 (5.7%) and cholecystolithiasis in 1 (2.8%). While laparoscopic cholecystectomy was performed in 34 patients (97.14%), conventional cholecystectomy was performed in 1 patient (2.8%) for adhesions.

**Conclusion:** In conclusion, no invasive disease was detected in patients with adenomyomatosis in cholecystectomy material.

**Keywords:** Gall bladder, adenomyomatosis, cholecystectomy, incidental

## PP-0619 [Hepatobiliary Surgery]

# Hemorrhage into Warfarin-Associated Liver Cyst: Case Report

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**Introduction:** Anticoagulants may cause spontaneous bleedings in elderly patients when therapeutic doses are exceeded, and hemorrhagic complications following continuous use of warfarin are common. In this study, we aimed to present the case with findings of right heart failure due to warfarin associated hemorrhage of liver cyst.

**Case:** Eighty-five-year-old male patient presented with complaints of abdominal pain, swelling in the abdomen and legs that lasted for a week. His history included hypertension, atherosclerotic vascular disease, aortobifemoral bypass operation, and the use of warfarin for approximately eight years. There were rales on the bilateral lung basals of the patient with significant dyspnea on physical examination and distension in the abdomen and hepatomegaly were detected. He had pretibial edema pitting. The INR was 4.67 in the laboratory findings of the patient with right heart failure. Magnetic Resonance imaging showed a heterogeneous lesion in T2A with a size of 18x16x17 cm almost filling the segments 6, 7 and 8 in the liver and a high signal lesion in T1A with hyper- and hypodense areas. The lesion was evaluated as hemorrhagic simple cyst. It was seen that the lesion caused pressure on vena cava inferior. In other segments, multiple simple cysts were observed with scattered settlement. The patient was evaluated as bleeding into warfarin associated cyst with current findings and warfarin was cut and low molecular weight heparin treatment dose was initiated and percutaneous hematoma drainage was planned. A 75% regression of the hemorrhagic cyst was detected in the control follow-up of the patient followed by percutaneous drainage. The patient's drains were withdrawn and the anticoagulant treatment was reorganized and the patient was discharged upon the absence of fluid coming from the drain and regression of the patient's clinical symptoms.

**Conclusion:** Conservative treatment methods can be evaluated primarily in advanced age patients with comorbidities.

**Keywords:** Liver cyst, warfarin, hemorrhage, right heart failure

## PP-0620 [Hepatobiliary Surgery]

# Prognostic Factors Affecting Survival in Pancreatic Cancer Surgery

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**Objective:** In this study, we aimed to evaluate the factors affecting the survival of patients operated with the prediagnosis of mass in pancreas.

**Material and Methods:** The demographic and clinical characteristics, laboratory and pathology results of the patients who were operated between January 2012 and December 2017 were retrospectively reviewed.

**Results:** The pathology results of 22 (69%) of 32 patients who underwent pancreatic surgery were reported as malignant. The mean age of the patients was 68±10 years and the ratio of female to male patients was 0.58 (8/14). Tumor diameter was found to be 4.3±2.8 cm in average, in 10 patients (45.5%) at the head of pancreas, in 7 patients (31.8%) in ampulla, in 2 patients (9.1%) in choledoch and duodenum, was located in the distal pancreas in 1 patient (4.5%). Pyloric pancreaticoduodenectomy was performed in 14 patients (64.3%), classic whipple and diversion in 3 patients (13.6%) and subtotal pancreatectomy in 2 patients (9.1%). Adenocarcinoma was reported in 17 patients (27.4%), mucinous cystadenocarcinoma in 3 patients (4.9%), and stromal tumor and adenosquamous carcinoma in 1 patient (1.6%) respectively. The average number of lymph nodes was 14.4±7.8. Pathological stages of the patients were reported as Ib, IIa and III in 4 patients (18.2%), IIb in 8 patients (36.4%) and IV in 2 patients (9.1%) respectively. Although peroperative mortality was not observed, 1 patient was reoperated due to anastomotic leakage in the early postoperative period, and subsequently died due to pneumonia and ARDS. Two patients (3.2%) developed external, low-flow, pancreatic fistula and was treated conservatively. The average hospital stay was 14.1±4.8 days. During the 5-year follow-up period, 13 patients (60%) lost their lives. The expected overall mean survival value was 21.4±5.3 months (95% CI: 11-32 months), respectively, while overall survival at 1 and 5 years were 73.9% and 17%, respectively. One-way analysis showed significant difference in mortality in advanced age, tumor diameter, number of lymph nodes removed, and operation type parameters. In multidimensional analysis using these parameters, advanced age was found to be the most important independent variable on mortality and it was found to increase the risk of death 9 times (OR: 8,62, 95% CI: 0,7-1, p=0,062).

**Conclusion:** Although curative treatment of pancreatic tumors is surgical, postoperative overall survival rates are very low. The 5-year survival rates in the literature have been reported as 5-7% for ampullary cancer and 20-60% for adenocancer. Age, lymphatic involvement, tumor type, tumor stage and palliative surgery have been studied as important prognostic parameters in pancreatic cancers. In this study, although the overall survival rates of patients who were operated for pancreatic cancer were similar to those of the literature, old age was the most important independent prognostic parameter.

**Keywords:** Pancreatic cancer, survival, prognosis

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## PP-0621 [Hepatobiliary Surgery]

# Effect of Cholelithiasis Histology on Conversion Cholecystectomy

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**Objective:** We aimed to investigate the effect of histopathologic factors on conversion cholecystectomy.

**Material and Methods:** 3338 laparoscopic cholecystectomy and 121 conversion cholecystectomy were performed between January 2008 and June 2017. The patients were divided into two groups as laparoscopic and conversion cholecystectomy groups. Histopathologic data of 140 patients in both groups were analyzed randomly and retrospectively compared.

**Results:** There was statistically significant difference between surgical types according to necrosis, polymorphonuclear leukocytes, mononuclear cells, and edema levels (p<0.01). The incidences of polymorphonuclear leukocytes, and mononuclear cells in the cases who underwent conversion cholecystectomy is more apparent than in those with laparoscopic cholecystectomy. The rate of severe edema in conversion cholecystectomy was higher than that of laparoscopic cholecystectomy (p<0.01). The incidence of significant and severe granulation tissue was higher in cases with conversion cholecystectomy (p<0.01) than in laparoscopic cholecystectomy patients. There was a statistically significant difference between surgical types according to granulation tissue, neoangiogenesis and fibroblast levels (p<0.01). There was a statistically significant difference between the necrosis-edema bilateral levels and Verhofstadt scores according to the type of operation (p<0.01).

**Conclusion:** Cholelithiasis histopathology evaluating intra-wall factors has a significant effect on the risk of conversion cholecystectomy with non-wall factors. The increase in Verhofstadt score and necrosis-edema pair has been shown to be highly sensitive to transition in conversion to cholecystectomy surgery.

**Keywords:** Laparoscopic cholecystectomy, conversion cholecystectomy, histopathology

## PP-0622 [Hepatobiliary Surgery]

### Hepatocellular Carcinoma Imitating Liver Abscess

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Hepatocellular carcinoma (HCC) is the most common primary tumor of the liver and can manifest itself in many different ways. It may also develop without a known risk factor. We present a case of hepatocellular carcinoma that imitates hepatic abscess that we successfully treated. A 20-year-old female patient was admitted to the emergency unit with complaints of fever and abdominal pain. There was an increase in leukocytosis and acute phase indicators in the examinations performed. The whole abdominal ultrasonography and computed tomography showed a heterogeneous mass lesion of approximately 15 cm in diameter, which was thought to be originated from the left lobe of the liver, and abscessing mass lesion with air bubbles. Transaminases were elevated. As a preliminary diagnosis, liver abscess was considered, but magnetic resonance imaging was performed in terms of mass characterization and it was found that the mass contained necrotic areas and was solid. The patient was prepared for surgical exploration with intravenous antibiotic therapy and fluid support. In the exploration, a mass originating from the left lobe of the liver was determined and left lateral sectionectomy was performed. The patient who had an uncomplicated postoperative period was discharged on the 7th postoperative day. On histopathological examination, the mass was evaluated as a well differentiated hepatocellular carcinoma with 90% coagulative necrosis. Patients with hepatocellular carcinoma may come to the hospital with various clinical scenarios. In the differential diagnosis of liver masses, advanced imaging methods play an important role in acute abdominal pain and fever. Hepatocellular carcinoma should be considered in differential diagnosis in young patients in whom there is no known risk factor.

**Keywords:** Hepatocellular, cancer, liver, abscess

## PP-0623 [Hepatobiliary Surgery]

### Paraoxonase and Oxidative Stress Parameters in Patients with Acute Pancreatitis: Prospective Clinical Trial

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**Objective:** In this study, we investigated the possible role of paraoxonase (PON-1) in acute pancreatitis physiopathogenesis and clinical follow-up as a lipophilic antioxidant enzyme transported by HDL (high density lipoprotein) cholesterol. In addition, we evaluated the correlation with known biochemical parameters and clinical severity scores by presenting the possible relationship between other antioxidant agents, oxidative stress and lipid profile.

**Material and Methods:** Blood was drawn from the patients diagnosed with acute pancreatitis and followed in our clinic at the time of admission (0 day), 3rd day and 10th day and hemogram, broad biochemistry, lipid profile, PON-1 and oxidative stress parameters (malonyl dialdehyde, MDA, superoxide dismutase, SOD, total antioxidant capacity, TAC) were analyzed. Clinical scores were noted and correlated with biochemical results, including demographic data and radiographic imaging methods of all patients. Statistical analyzes were performed with Kolmogorov-Smirnov, Friedman and Wilcoxon tests, Spearman test was used for correlation, and  $p < 0.05$  was considered significant.

**Results:** The mean age of 25 patients was 51.4. Ranson scores were calculated as 0-2 points (60%), 3-4 points (24%) and 5-6 points (16%) respectively. According to computed tomography severity index (CTSI); 72% mildly severe, 24% moderate, and 4% of them had severe pancreatitis picture. Clinical severity of the disease was noted as mild, moderate and severe pancreatitis (64%, 28% and 8%, respectively). When the biochemical data were analyzed, it was seen that the values of LDH (mean 452.5 U/L) and

AST (mean 417.08 U/L) were reflected in Ranson scores. Total cholesterol, triglyceride, and LDL (low density lipoprotein) values remained at the normal reference interval, while HDL level was significantly higher than the 10th reference interval ( $p<0.001$ ) while the 3rd and 10th day tended to decrease significantly. PON-1 levels were calculated at mean values of 69.23, 76.72 and 113.15 U/mL at 0, 3rd and 10th days, respectively; there was a positive correlation with HDL ( $p<0.001$ ). MDA level decreased significantly (mean 3.9 vs. 2.28  $\mu\text{M/L}$ ,  $p<0.001$ ) while serum SOD level increased in parallel with PON-1 (mean 20.49 vs. 39.46 U/mL). TAC increased significantly with treatment (mean 0.52 vs. 1.22 mM/L).

**Conclusion:** Radiologic and clinical severity scores are compatible in patients with clinically mild pancreatitis associated with gallstone. The low PON-1 and HDL levels detected in the initial phase of acute pancreatitis and the antioxidant SOD and TAC concentrations increase with clinical positive correlation with treatment; MDA, which is an oxidative stress marker, which is initially elevated, falls in parallel. This demonstrates the importance of the balance between oxidative stress and antioxidant defense mechanisms in the clinical course of the disease and the potential to use PON-1 as a clinical marker.

**Keywords:** Acute pancreatitis, paraoxonase (PON-1), malonyl dialdehyde (MDA), superoxide dismutase (SOD), total antioxidant capacity (TAC), lipid profile

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## PP-0624 [Hepatobiliary Surgery]

# Is Laparoscopic Approach to Complicated Liver Cyst Hydatid Patients Possible?

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**Objective:** Cyst hydatid disease remains a common health problem for our region and country. In this clinical retrospective study, complicated liver cyst hydatid cases treated laparoscopically were examined.

**Material and Methods:** We retrospectively reviewed the medical records of 8 complicated patients (5 women, 3 men; mean age  $45\pm 4.42$ ; range 30 to 78) who were treated for liver cyst hydatid in our clinic between June 2016 and October 2017. Patients were evaluated in terms of age, sex, location of cyst, surgical method applied, duration of hospital stay, preoperative and postoperative complications and treatment methods applied for complications.

**Results:** The longest mean diameter of the cases detected by ultrasonography was evaluated as  $82.6\pm 7.53$  mm. When we looked at the anatomical location of the cysts in the liver, it was observed that they were located in segment 8 in 3 patients, segment 4 in 3 patients and segment 2 in the other 2 patients. Two patients (25%) were evaluated as ASA 1, 3 patients (37.5%) as ASA 2, and 3 patients (37.5%) as ASA 3. Mean operation duration was  $68\pm 8.91$  minutes. The longest surgery lasted 115 minutes and the shortest surgery lasted 45 minutes. Perioperative bleeding occurred in one of the patients. Bleeding control was provided with vascular ligation. Three patients were found to have bile duct involvement during the operation. It was repaired primarily and laparoscopically. Bile fluid was observed (150 cc per day) in one patient. Postoperative ERCP was performed. During the follow up of the patient, bile drainage was reduced and the biliary fistula closed itself. The mean duration of hospitalization was 4 (min: 2; max: 9) days. The patient developed a biliary fistula and was discharged on the 9th postoperative day. The mean follow-up period of the patients was  $6\pm 4.15$  months. No finding to consider recurrence was found in any of the patients who were followed-up at the outpatient clinic and evaluated every 3 months with USG. There was no correlation between the age of the patients and the diameter of the cyst ( $p=0.460$ ). There was no significant correlation between the diameter of the cyst and the operation duration ( $p=0.818$ ). There was no significant correlation between age and operation duration ( $p=0.626$ ). The relationship between diameter and duration was statistically significant ( $p=0.005$ ). It was determined that as the diameter of the cyst increased the duration of operation extended.

**Conclusion:** We did not find any recurrence in our follow-ups. Laparoscopic Liver Cyst Hydatid surgery is a surgical technique that combines the advantages of open surgery and percutaneous interventions. We think that removing the endocyst and exocyst that we routinely extract is sufficient. Today, laparoscopic surgical interventions in experienced centers take place in the treatment algorithm as an effective and safe method in the treatment of liver hydatid cyst disease. We think that standard laparoscopic instruments are sufficient for the surgery of complicated hydatid cysts.

**Keywords:** Liver, hydatid cyst, laparoscopy

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## PP-0625 [Hepatobiliary Surgery]

# Case Report of Spleen Infarction Developing after P. Falciparum



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**Introduction:** Splenic infarct is a rare spleen pathology that is often seen as a complication of other diseases and malaria is a rare complication that occurs most commonly during malaria infection, which is caused by *P. falciparum* or *P. vivax*. *Plasmodium falciparum* infection is rare in our country, but has been reported in cases of travel stories to endemic regions. As a complication of malaria, splenic infarct has been reported in very few cases.

**Case:** A 35-year-old male patient presented with a fever complaint to the emergency service and was evaluated by the department of infectious diseases. White cell 4.2 K/uL platelet 56.7 K/uL crp 99.5 mg/L *P. falciparum* was seen in peripheral smear. The patient had a malaria diagnosis due to *P. falciparum*. Artemeter Lumefantrine treatment was initiated and completed in 4 days. *P. falciparum* was not observed in the new smear and the patient was discharged with healing from infectious diseases. One week later, the patient was admitted with complaints of abdominal pain in the emergency department. Defense and rebound were positive in the physical examination and there was acute abdominal findings. White cell 11.2 K/UI CRP, 75.2 mg/L procalcitonin normal, platelet 191000 K/uL. Computed Tomography (CT) revealed that the spleen was larger than 15 cm and there was hypodense areas (splenic infarction) with no significant contrast enhancement, it was stated that it gained an abseiform appearance. Operation decision was made. Splenectomy was done. The postoperative complication did not occur. The patient had oral intake and he tolerated. Hemogram and vital findings were stabilized and the patient was discharged with healing.

*P. falciparum* malaria is seen especially in tropical regions. *P. vivax* is usually seen in our country. *P. falciparum* and *P. malaria* malaria were also found in the stories of patients who travelled abroad. *P. falciparum* has a severe course and it is the most fatal malaria and has a clinic of chill, shivering, fever and sweating as in other malaria species. Since surgical methods are generally not preferred in the treatment of patients, histologic examination usually could not be performed. In a case reported by Hovette et al., a microscopic examination of the spleen showed that the infarct was surrounded by fibroblastic granuloma tissue. Our case was interpreted as a spleen containing infarct areas. In the studies examining the occurrence of splenic infarct, it is known that most of the patients are young (3-30 years). Our case was 35 years old. In the literature, splenic infarcts appeared 7 to 30 days after the start of treatment and most cases developed due to *P. falciparum* malaria. In 60-70% of cases, there is pain in the left upper quadrant of the abdomen. In our case complaints started after a week of treatment and the patient presented with complaints of abdominal pain. Splenic infarct usually responds to medical treatment and has good prognosis. Surgery is not considered unless there is bleeding, rupture, abscess and pseudocyst. In our case, the infarct area became in the form of an abscess.

**Conclusion:** It should not be forgotten that splenomegaly as well as splenic infarction may develop in the cases with malaria and there may be pain in the left hypochondriacal region during treatment, splenic infarct should be suspected even if there is no pain. It should be kept in mind that emergency surgery may be necessary.

**Keywords:** Spleen, splenic, infarct, malaria, *p. falciparum*

## PP-0626 [Hepatobiliary Surgery]

**A Rare Case Report: Spontaneous Hepatocellular Carcinoma Bleeding****Muhammet Burak Kamburoğlu, Enis Dikicier, Mertcan Akçay, Ali Muhtaroglu, Yeşim Akdeniz***Department of General Surgery, Sakarya University School of Medicine, Sakarya, Turkey*

**Introduction:** Hepatocellular carcinoma (HCC) is the most common tumor in the liver, the fifth most common solid tumor in the world, and the third most common cancer-related death. HCC often develops on the ground of cirrhotic liver (80%). Cirrhosis developing on the ground of hepatitis b and c and Spontaneous HCC bleedings occur between 3% and 15% of HCC patients and the third most common cause of mortality in HCC. In this case we will present HCC hemorrhage that was detected in a patient who was not previously diagnosed with HCC.

**Case:** A 53-year-old male patient was brought to the emergency service due to syncope with ambulance. His vital findings ta: 70/40 mm hg, sat o2: 92 pulses: 124 beats/min were detected. Pathology was not detected as a result of cranial computed tomography (bt) and diffuse magnetic resonance (MR) imaging of the patient who did not describe abdominal pain. He stated that he had no known illness in the patient's anamnesis. Laboratory findings of the patient with a normal abdominal examination; Hgb: 13.5 g/dl Wbc: 19,100 k/l, there was no significant feature in blood biochemical parameters. In IV contrast-enhanced CT, there were round shaped heterogeneous densities (hepatic tumor?) with mass formation that enlarged the left lobe of the liver. There was a common free fluid collection in the pelvic area. Immediate operation was performed upon hemorrhagic detection of intraabdominal puncture material performed in the emergency department with USG. Our perioperative findings; about 2500 cc of hemorrhagic fluid in the abdomen and hematoma were present. The liver had a nodular – cirrhotic appearance. It was observed that a mass of 5x4 cm was perforated in segment 3 and it had bleeding. Segmental resection was conducted to include mass. The pathology report was obtained as well differentiated hepatocellular carcinoma. The patient was discharged on the fourth postoperative day.

**Conclusion:** The 30-day mortality rate in HCC-related bleeding is 25-75%. Survival rates vary between 2 and 25 months depending on the patient's condition. The most common finding in spontaneous HCC bleeds is abdominal pain (66%-100%), which is contrary to our case. The bleeding-related shock table is seen in 33% -90% of cases. Post-diagnosis treatment methods are determined by the patient's hemodynamic status and liver functions. TACE is firstly preferred in centers having sufficient technical equipment with a success rate of 53-100% in HCC hemorrhage in patients with stable hemodynamics and multifocal or bilobar HCC and without a thrombus occluding portal vein almost completely. Surgical treatment should be preferred in cases with hemodynamic stability, peritonitis findings, shock clinic, and portal vein thrombus but cannot be performed TACE as in our case.

**Keywords:** HCC, rupture, bleeding

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## PP-0627 [Hepatobiliary Surgery]

# A Rare Cause of Acute Abdomen; Spontaneous Liver Simple Cyst Rupture: Case Report

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**Introduction:** Simple cysts of the liver are benign tumors that can be congenital or acquired. Simple liver cysts are usually asymptomatic and rarely cause complications such as rupture, hemorrhage, infection and obstructive jaundice. Intracystic hemorrhage and rupture are the rarest complications.

**Case:** A 70-year-old male patient with a complaint of abdominal pain that started two days ago spreading to all quadrants and was admitted to our emergency service. Diffuse tenderness and defense were detected in all quadrants of the abdomen in the physical examination of the patient who had no trauma story. Ultrasonography and abdominal tomography of the abdomen showed widespread free fluid and cyst in the liver. The patient was taken to the operation urgently with these findings. In the operation approximately 900 cc of hemorrhagic fluid was aspirated in the abdomen and a cyst having approximately 10x15 cm diameter was observed in the left lobe of the liver and the cyst was ruptured from the anterior wall. The patient who underwent cystectomy was discharged with healing on the 6th day post-operatively. The pathology result was obtained as liver simple cyst.

**Conclusion:** Spontaneous rupture is the rarest complication of simple liver cysts. According to our research, 16 cases including our case have been reported in English literature so far. The two most important risk factors in intracranial hemorrhage and rupture, are hypertension and the use of anticoagulant drugs. Our patient also had a history of hypertension. The most common clinical symptoms are sudden and severe abdominal pain, abdominal discomfort, and nausea, and cases with no specific symptoms have also been reported. The treatment method in spontaneous simple liver cystic perforations is percutaneous drainage or surgery depending on hemodynamic stability. However, the preferred method is laparotomy in most of the cases reported in the literature.

**Keywords:** Liver, simple cyst, spontaneous rupture, acute abdomen

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## PP-0628 [Hepatobiliary Surgery]

# Case Report: Spontaneous Regression in Giant Liver Cavernous Hemangioma

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The most common benign tumor of the liver is hemangioma. Liver hemangiomas can be seen as multiple as well as solitary. The hemangiomas with a diameter of over 5cm, whose diameters vary from a few millimeters to 20 cm, are defined as giant hemangiomas. In this case we aimed to demonstrate that the size of giant hemangioma decreased by only follow-up without surgery. Tomographic examination of our case revealed a 107x64x100 mm cavernous hemangioma with subcapsular localization and partially exophytic growth in segment 7 of the liver. The cases smaller than 5 cm in size are usually asymptomatic. However, giant hemangiomas can be symptomatic. There were early satiety related with compression, nausea and pain in the right upper quadrant. The case with no morbidity receiving 18-month follow-up comes for regular controls. Whole abdominal USG after 18 months of follow-up, revealed that hemangioma spontaneously regressed to a size of 55x60 mm. Most of the hepatic hemangiomas are asymptomatic and require no treatment. Our case was followed without any treatment. As a result, giant hemangiomas

are rare. Surgical treatment is recommended in cases with a size greater than 5 cm and symptomatic. However, although it was larger than 5 cm and symptomatic, the patient was only followed up for 18 months without surgery, and it was observed that the symptoms and the size decreased effectively.

**Keywords:** Hemangioma, liver, cavernous, regression

## PP-0629 [Hepatobiliary Surgery]

# A Rare Case: A Case of Male Hepatic Adenoma Coming with Hemorrhagic Shock as a Result of Spontaneous Rupture

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Hepatic adenoma is a capsular benign tumor as result of benign proliferation of hepatocytes. It is most commonly seen in women using oral contraceptives. About 85% of cases with hepatic adenomas consist of young women and are unlikely to be seen in children, men and the elderly. About 10% of patients are asymptomatic and are detected incidentally; about 50-60% of the patients present with abdominal pain or mass complaints. 30-40% of the cases are admitted to the hospital with shock and acute abdomen as a result of hemorrhage. The atypical condition in our case was that the patient was an old male. Patient with sudden hemoglobin decline and tachypnea, dizziness, sweating and severe abdominal pain was admitted to the external center. He was referred to us with the diagnosis of liver hemangioma rupture as a result of examinations performed here. It was observed as a result of the first interventions that the patient had hemorrhagic shock and emergency laparotomy was performed. After hemostasis was achieved, the lesion with hemangioma pre-diagnosis was sent to pathology and the operation was terminated. Pathology resulted in hepatic adenoma. Hepatic adenomas carry a markedly spontaneous rupture risk with intraperitoneal hemorrhage and are admitted with up to 25% of abdominal pain. In this case; spontaneous rupture due to hemangioma was first considered with laboratory and imaging findings but histopathologic diagnosis after surgical resection was seen as a rare hepatic adenoma in men and in the elderly.

**Keywords:** Hemorrhage, hepatic adenoma, liver, rupture, shock

## PP-0630 [Hepatobiliary Surgery]

# Hepatic Arterial Pseudoanalysis Occurred During the Placement of the External Drainage Catheter to the Patient with Biliary Leakage Developing Intraabdominal Abscess after ERCP

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Hepatic artery pseudoaneurysm is a rare vascular complication. It occurs in about 2% of patients. Intrahepatic pseudoaneurysms usually occur after liver biopsy or transhepatic biliary drainage. It may be ruptured and may be the cause of bleeding. If an arteriovenous fistula or pseudoaneurysm is detected, it is usually embolized. Visceral artery pseudoaneurysms are rare, but their mortality is high. They initiate immediately and the first clinical symptom of these aneurysms is acute rupture and is associated with haemodynamic instability causing perioperative morbidity and mortality. Hepatic artery aneurysm has the fourth place among intra-abdominal aneurysms after infrarenal aorta, iliac arteries and splenic artery. Hepatic artery aneurysms have 80% extrahepatic and 20% intrahepatic localization. Intrahepatic pseudoaneurysms usually occur after liver biopsy or transhepatic biliary drainage. The most important detail of our case was that if the USG had not been performed by an experienced and careful radiologist after the external abscess drainage, the hepatic artery pseudoaneurysm could be interpreted in favor of the abscess and attempted to drain it and encounter a serious and very mortal picture. We would like to emphasize that careful attention should be paid to pseudoaneurysms that may develop secondary to abscess drainage catheter placement, in control imagings following abscess drainage, which is especially close to the arteries. It is very easy to rupture the pseudoaneurysm when the catheter is inserted with the preliminary diagnosis that it may be a new abscess center.

**Keywords:** Aneurysm, abscess, ERCP, hepatic artery

## PP-0631 [Hepatobiliary Surgery]

# Can Excessive Clip Use in Laparoscopic Cholecystectomy Be a Stimulating Factor in Anticipating Bile Duct Injury?

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**Objective:** Bile duct injury due to laparoscopic gall bladder operations is a serious complication that can cause morbidity and mortality. The reported frequency is reported at 0.2-1.1%. In this study, we retrospectively analyzed 7 cases followed and treated due to bile duct injury in terms of types of injuries and the number of clips used.

**Material and Methods:** Seven cases, 4 of which in our clinic, with bile duct injury between January 2016 and December 2017, were included in evaluation. The injury types of the patients were determined according to the Strasberg classification. The numbers of the clips used in the operations in which injuries occurred were determined.

**Results:** It was found that an average of 5.4 (3-8) clips were used in the cases. According to Strasberg classification; Strasberg D in 2 cases, Strasberg E2 in 1 case, Strasberg E3 in 3 cases, and Strasberg E4 injury in 1 case were detected. One of the patients with type D injuries underwent primary repair, and a late admitted case was treated with ERCP stenting and percutaneous biloma drainage. Bilioenteric anastomosis was performed in cases of E type injury. No complications were observed in the early postoperative period.

**Conclusion:** Excessive clip use during laparoscopic cholecystectomy was considered to be a stimulating factor for possible bile duct injury.

**Keywords:** iatrogenic bile duct injury, laparoscopic cholecystectomy, extreme clipping

## PP-0632 [Hepatobiliary Surgery]

# Our Approach in Gall Bladder Cancers: Series Presentation of 51 Cases

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Gall bladder cancer is the fifth most common malignant tumor of the gastrointestinal system with very low survival despite improvements in modern diagnostic and therapeutic methods and continues to be a serious problem due to the low chance of curative treatment. In Turkey, annual incidence of it is 1.6/100,000. It is usually detected in late stages when clinical symptoms occur except its detection incidentally in cholecystectomy specimens.

In this study, file data of patients with gall bladder cancer diagnosed or referred to our hospital between 2012 and 2017 were examined. According to this; the data of 51 patients, 24 of whom were male and 27 were female, were evaluated. The mean age was 66 (42-87). There were 6 (11.76%) patients between the ages of 40-50, 6 (11.76%) between the ages of 51-60, and 39 (76.42%) patients over the age of 60 years. Diagnosis was established incidentally in cholecystectomy specimens in 19 (37.25%) patients, with invasive and non-invasive imaging methods in 9 (17,64%) patients, with biopsy upon suspicion in imaging in 13 (25,49%) patients, with frozen examination performed during laparotomy because of the suspicion of gall bladder cancer in pre-operative period imaging in 10 (19,60%) patients. The distributions of 39 (76.47%) patients operated were; 24 (61.58%) cholecystectomy, 3 (5,88%) radical cholecystectomy, 2 (5,12%) hepatectomy and 10 (25,64%) patients had palliative interventions. In the postoperative period, 3 (7,69%) patients had high cholestatic enzymes, 2 (5,12%) patients had cholangitis, 2 (5,12%) patients had biliary leakage, 2 (5,12%) patients had intraabdominal abscesses and 1 (2.56%) patients developed postoperative bleeding.

Distribution of patients according to histopathology; adenocarcinoma in 43 patients (84.31%), signet-ring cell carcinoma in 1 patient (1.96%), mixed adenoneuroendocrine carcinoma in 3 patients (5.88%), squamous cell carcinoma in 2 patients (3.92%), clear cell carcinoma in 1 patient (1.96%) and adenosquamous carcinoma was diagnosed in 1 patient (1.96%). The mean life span was 9,10 (1-49) months in all patients who were followed up operatively and nonoperatively. The mean survival time was 11.46 months (1-49) months in patients treated with operative treatment and 1.41 (1-8) months in nonoperatively treated patients. Today, despite progress in early diagnosis and increased survival in gall bladder cancers, they are still one of the deadly cancers

in cases of late stage. No satisfactory results were obtained with radiotherapy and chemotherapy. Today, the most effective treatment for gall bladder cancers is early diagnosis and surgery. Palliative procedures are not effective on survival in late-stage cases when resection is unlikely, but they are still applications that increase the quality of life of the patient.

**Keywords:** Gall bladder, cancer, treatment

## PP-0633 [Hepatobiliary Surgery]

# Determination of Information Needs of Pre-discharge Patients on Laparoscopic Cholecystectomy

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**Objective:** This study was conducted with the aim of determining the information needs of the patients who underwent laparoscopic cholecystectomy before discharge.

**Material and Methods:** The research was conducted with 78 patients undergoing laparoscopic cholecystectomy in Dr. Burhan Nalbantoğlu State Hospital surgical service. Data were collected between 15 December 2014 to 31 May 2015 with the data collection form created by the researcher by searching the relevant literature. The data were collected by the investigator by face to face meetings with the patients. Permission was obtained from the institutions to be carried out and from the ethics committee. Frequency analysis and Chi square tests were used in SPSS (Statistical Package for the Social Sciences) 20.0 package program in the analysis of the data.

**Results:** It was determined that 64,10% of the patients participated in the research were female, 44,87% were in the 30-49 age group and 41,03% were high school graduates. After the procedure, 93,59% of the patients were hospitalized for 1-3 days, 5,13% of them for 4-6 days and 61,4% of them had never undergone surgery before. According to the results obtained from the study, it was determined that 28,2% of the patients were not informed about the operation in the preoperative period and 83,3% of the patients were not informed related to the emergency cases that should be referred to the doctor after discharge. With respect to home care of patients; 85,9% of them were informed about wound care, 92,3% of them about using drugs, 78,2% of them about nutrition, and 30,7% of them were informed about activities. It was determined that 93,5% of the patients were not informed about problems that they might encounter at home. None of the patients were given a written leaflet, booklet etc. about the discharge information when they were discharged from the hospital and 82% of the patients wanted to be given a training booklet.

**Conclusion:** It was concluded that nurses did not take an active role in the discharge Training process of the patients. Patients want that the training book should include topics such as exercise, nutrition, wound care, drug use, things that need to be done in emergency situations to be encountered at home, pain management and postoperative information. It may be advisable to conduct planned discharge training in accordance with the individual characteristics of the patients and their learning needs and to prepare a patient Training booklet.

\* It is post graduate thesis study.

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**Keywords:** Laparoscopic surgery, cholecystectomy, nursing care, discharge training

## PP-0634 [Hepatobiliary Surgery]

# Cause of Mechanical Icterus in a Young Patient; Tuberculosis

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**Introduction:** Mechanical icterus is characterized by enlargement of the bile ducts in proximal due to obstruction of the bile ducts. It can form due to many causes, such as tumor, stricture, gallstone, and biliary atresia. In this study, mechanical icterus formed of compression of intraabdominal lymphadenopathy to bile ducts associated with rare tuberculosis.

**Case:** A 24-year-old male patient presented with complaints of abdominal pain, jaundice and itching in the emergency department for 13 days. Sensitivity was seen in the right upper quadrant of the abdomen, and there was icterus in the skin,

murphy findings were not detected, and inguinal and axillary LAPs were present in peripheral lymphadenopathy (LAP) examination. In laboratory tests, the values were: ALP 369, GGT 441, ALT 112, AST 86, total bilirubin 4,77, direct bilirubin 1,81, WBC 13,6. Bile duct was contracted, wall thickness was 4mm, and there was acute cholecystitis suspicion in hepatobiliary ultrasound. The diameter of the choledochus was enlarged to 11 mm, had an appearance consistent with 9 mm calculus and dilatation in the intrahepatic bile ducts. Lesions evaluated as multiple LAP the largest of which was 27x15mm in size in porta hepatis was observed. In contrast-enhanced computed tomography, a septate collection area to the lobule with a 55x40 mm extending into the caudate lobe in segment 4 of the liver, fluid and millimetric lymph nodes in liver hilus and peripancreatic area were detected. The patient was hospitalized in our clinic with mechanical icterus diagnosis. Magnetic resonance imaging and magnetic resonance cholangiopancreatography revealed the largest 50 mm, some cavitory, conglomerate LAP, dilated IHBD secondary to LAP compression and bile collapsed gall bladder. Multiple reactive lymph nodes were observed in both axillary and inguinal regions in superficial USG. Infectious diseases and hematology consultations were performed. Elisa, coombs tests they requested were negative and sedimentation were high with the value of 63. CA 19-9 was high with 148.59 and CEA and AFP were low. A case of aspirate from the lesion in the liver was obtained by interventional radiology, and a purulent fluid specimen from the lesion considered as LAP in the liver hilus region was taken. All samples were submitted for culture and histopathological evaluation. PET was performed with the suspicion of malignancy and multiple lymph nodes were seen. Supraclavicular LAP was excised under local anesthesia. There was no reproduction in aspirate culture. Mycobacteria was not seen on ARB direct microscopy. Pathology came as inflammation. M. tuberculosis complex reproduced in mucobacterial culture in the 1st week. The classical 4-item antituberculosis treatment was started and total bilirubin decreased to 0,6 and direct bilirubin to 0,4 within 2 months.

**Conclusion:** Jaundice may develop due to prehepatic, hepatic and posthepatic causes. Posthepatic causes develop due to occlusion. The most common causes of obstruction are gallstone fallen in bile ducts, stricture, atresia, cholangiocarcinoma, pancreatitis, and pregnancy cholestasis. Apart from these reasons, other diseases that cause pressure on the bile ducts may also cause obstructive jaundice. In our case, a rare cause of compression to bile ducts of tuberculous lymphadenopathy was presented. If there is a compression of the lymph node in patients who have been examined for obstructive jaundice, intraabdominal tuberculous lymphadenopathy which is a rare cause should be kept in mind.

**Keywords:** Mechanical icterus, lymphadenopathy, tuberculosis

## PP-0635 [Hepatobiliary Surgery]

# Reasons for Transition from Laparoscopic Surgery in Acute Cholecystitis in the Early Period to Open Surgery

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**Objective:** Early or 6-8 weeks later cholecystectomy in acute cholecystitis, has recently left its place to early cholecystectomy irrespective of time and the laparoscopic approach is the gold standard. In this study, it was aimed to evaluate the causes of starting laparoscopic surgery due to cholecystitis and transition to peroperative open surgery.

**Material and Methods:** 158 patients operated with the diagnosis of acute cholecystitis at Çanakkale State Hospital General Surgery Department between January 2014 and December 2017 were examined retrospectively. The demographic information of the patients, reasons of transition from laparoscopic to open method, rates, duration of hospital stay, results, mortality and morbidity parameters were recorded in the prepared forms. Patients who were initiated with direct laparotomy were excluded from the study.

**Results:** 158 patients were included in the study and the mean age of all patients was 58.6 (18-89). In terms of gender distribution, 55 (34.9%) of the patients were male and 103 (65.1%) were female. Transition from laparoscopic to open surgery took place in 20 patients (12,7%). Reasons for conversion in the working group were intraabdominal adhesion associated with previous operations (n=4, 20%), no anatomical structures (n=11, 55%), suspicion of gall bladder cancer (n=2, 10%), bleeding that could not be controlled with the laparoscopic method,(n=2, 10%), and colon injury during dissection (n=1, 5%). The mean duration of hospitalization was higher in cases in whom it was turned to open surgery (6.7±2.00 and 3.33±0.89). There were no mortalities while surgical field infection was seen in 2 patients in whom it was turned to open surgery.

**Conclusion:** In acute cholecystitis patients, laparoscopic cholecystectomy can be performed with acceptable rates of transition to open surgery regardless of the onset of symptoms. We think that switching to open surgery with appropriate indications may prevent morbidity and mortality that may develop.

**Keywords:** Acute cholecystitis, laparoscopic cholecystectomy, open cholecystectomy

## PP-0636 [Hepatobiliary Surgery]

## When Should We Perform Mrcp, Ercp and Cholecystectomy in Acute Biliary Pancreatitis?

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**Objective:** Cholecystectomy is the most appropriate treatment to prevent recurrent biliopancreatitis attacks after acute biliary pancreatitis. However, the timing of cholecystectomy in mild pancreatitis is controversial. Moreover, the main etiologic factor causing pancreatitis attack is choledocholithiasis developing secondary to cholelithiasis. In this case, performing ERCP is on the agenda. However, ERCP is not an innocent treatment because of its complications. So, it is recommended that it is applied in selected cases. However, information about timing is controversial. With regard to the diagnosis, which patient and when to use the MRCP examination is also controversial.

**Material and Methods:** We retrospectively reviewed the patients hospitalized for acute biliary pancreatitis in our clinic between January 2016 and December 2017. Demographic data, laboratory tests, whether MRCP and ERCP were performed, timing if performed, cholecystectomy timing, total number of attacks, frequency of attacks, and presence of pancreatitis attack after cholecystectomy were examined.

**Results:** A total of 75 patients (M/F: 26/49) were examined between the years 2016-2018. The mean age of the patients was 63.17/year. Abdominal USG and abdominal CT were performed for the diagnosis of all of the patients. Although radiological findings in 9 patients showed that the pancreas was normal, diagnosis was established upon suspicion in clinical examination and laboratory findings. The mean Ranson score of the patients was 2 (0-4). Direct bilirubin was found above 2 gr/dl in 62% of patients. MRCP examinations were performed in 47 patients with hyperbilirubinemia, but only 22 patients had choledocholithiasis. Stone was detected in choledoch as a result of ERCP in only 7 patients from 22 patients with choledocholithiasis having a tendency of increasing of bilirubin levels. Choledoch was observed as normal in the remaining 15 patients. Elective cholecystectomy was performed in 12 of these patients because the first pancreatitis was diagnosed in 42 of the patients and diagnosed in the subacute period. Cholecystectomy of 12 patients who underwent cholecystectomy was completed before their discharge after observing the clinical improvement of acute pancreatitis in the time period they were hospitalized due to the 2nd or 3rd attacks they had. There were no differences between the two groups in terms of complication, surgical difficulty, and the rates of transition to open surgery regarding acute and elective cholecystectomy. re-admission was observed due to pancreatitis twice in the course of 6 months to 1 year in 4 patients undergoing cholecystectomy.

**Conclusion:** There is no need to immediately perform ERCP when bilirubin values of patients who are admitted due to acute biliary pancreatitis clinic are high and tend to elevate. The clinical condition of the patient can have a tendency to improve spontaneously in the 48-hour follow-up. Similarly, routine use of MRCP is not correct. 62% of the patients had MRCP and choledocholithiasis was detected, but 68.1% of them did not need ERCP. As a conclusion, if patients being admitted with biliary pancreatitis are exposed to an increase in bilirubin level, follow-up should be done for 48 hours. If suspicion persists, performing MRCP and ERCP should be cost-effective.

**Keywords:** Ercp, Mrcp, acute pancreatitis

## PP-0637 [Hepatobiliary Surgery]

## Our Laparoscopic Cholecystectomy Experience in the Patient with Situs Inversus Totalis

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Situs inversus totalis (SIT) is the total location of normal localization of organs on the reverse of mirror image. It is seen in 10.000-50.000 live births. Unlike the partial situs inversus, there are not vascular and extra hepatic bile duct anomalies in SIT. The incidence of cholelithiasis and acute cholecystitis is the same as in the community. Laparoscopic intervention is possible with conventional surgical techniques, although difficulties are encountered by way of surgery for placement of organs. A 52-year-old SIT patient who was admitted to our clinic was diagnosed as having cholelithiasis. The patient's abdominal examination was normal and laboratory values were within normal values. The USG and MR cholangiograms of the abdomen revealed multiple stones in the gall bladder. Intra and extra hepatic bile ducts were natural. There was a state of SIT. The patient was taken to elective operation. In the operation room the placement of the devices was modified in accordance with the patient. The surgeon and

the first assistant were placed to the right of the patient, the nurse and the second assistant to the left of the patient. The patient was positioned as head up and right lateral. A 10mm trocar was inserted to the abdomen with a 1cm incision at the umbilical level and the abdomen was insufflated. Another 10 mm trocar was inserted from the 1 cm incision below the xiphoid, and 5 mm trocars from the 2, 0.5 cm incisions were inserted into the abdomen from the 5 cm medial of the left SIAS with 5 cm spaces and 4 port technique was used. The surgeon used epigastric and lateral ports as in other operations. Gall bladder was found. Callot triangle was dissected. The cystic duct and artery were isolated and clipped and cut. The gall bladder was dissected from the liver bed and taken out of the abdomen from the epigastric incision. The patient was discharged on the first postoperative day.

**Keywords:** Cholelithiasis, cholecystitis, situs inversus totalis

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## PP-0639 [Hepatobiliary Surgery]

# Isolated Gall Bladder Hematoma Associated with Anticoagulant Therapy

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**Introduction:** Today, anticoagulant treatments are applied in the treatment or prophylaxis of cardiac and thromboembolic diseases. These treatments are followed by INR control to prevent thrombosis or hemorrhage. Hemorrhages due to coumadine overdose are major causes of mortality and morbidity. Here we present the management of a patient diagnosed with isolated gall bladder hematoma following coumadin overdose.

**Case:** A 76-year-old female patient was admitted to the emergency service with complaints of right upper quadrant pain, nausea and vomiting. She had a history of coumadin use due to known HT, DM, heart valve disease and atrial fibrillation. She was tachycardic, normotensive and tachypneic in the physical examination. There was sensitivity and defense in the upper right quadrant. Laboratory values were reported as INR: 12, Hb: 8, WBC: 14,000, Creatinine: 5.8, and T.bil: 1. In the USG: gall bladder was 12x6 cm hydroptic, wall thickness 5 mm, stone in the sac, the largest of which was approximately 2cm, solid echogenicity in the neighborhood of the sac wall, (structure abscess?) (Tm?) Fluid was present between the liver periphery and the loops. No contrast examinations could be performed due to ARF. Coumadin treatment of the patient, whose oral intake was stopped, i.v hydration and antibiotherapy started, was discontinued. The control INR value of the patient, whose ERT and FFP replacement (4 ERT during admission, 5 FFP), vitamin K and low-molecular-weight heparin therapy initiated, reduced to 1.8. USG-guided percutaneous cholecystostomy was performed in the patient whose examination findings did not regress on the 1st day of hospitalization. She had 100 cc of hemorrhagic fluid. There was no abscess content. In the MR-MRCP performed in the 6th day of hospitalization, there was plastering fluid in the periphery of the liver, gallbladder was 12x6 cm and hydroptic, and there were 2.5 cm diameter multiple stones. It was found that the catheter was outside the sac lumen. A low-sequence filling defect was evaluated in favor of hematoma in the sac. The choledoch was evaluated as normal. The catheter was withdrawn because there was no drainage from the cholecystostomy catheter. The gall bladder was 12x6 cm in the control USG performed on 13th day and it was observed that hematoma liquefied when compared with the previous USG. Pericholecystic plastering fluid was detected. Thickness and irregularity up to 1 cm to 1-2 mm in some places were found in the thickness of the wall. Early cholecystectomy was planned for the patient whose laboratory values returned to normal. The patient was operated on the 16th day. The laparoscopic operation was switched on the open surgery with the cause of intense adhesions. Hydrops caused the sac to open and the hematoma was drained. Appropriate cholecystectomy was completed. The patient was discharged with healing on the 21st day. The pathology result was reported as chronic cholecystitis with bleeding and acute attack findings showing ischemic changes.

**Conclusion:** Warfarin used as an anticoagulant and an antagonist of vitamin K increases the risk of hemorrhage. INR should be checked regularly to keep warfarin dose at therapeutic interval. Patients should be informed in detail about warfarin use, interaction with other drugs and foods. Gall bladder as a rare bleeding focus should be kept in mind apart from intracranial, retroperitoneal, gastrointestinal and intramuscular bleedings, which can be frequently observed in the literature, in the patients receiving anticoagulant therapy.

**Keywords:** Anticoagulant hemorrhage, coumadin, gall bladder hematoma

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## PP-0640 [Hepatobiliary Surgery]

# Results of Surgical Treatment of Colorectal Cancer Liver Metastasis

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**Objective:** Liver is the most common metastatic organ of colorectal cancer (CRC). Surgery is the option of providing the possibility of the highest cure in isolated liver metastases of CRC. In this study, we aimed to share our experience with CRC liver metastasis treatment.

**Material and Methods:** All cases operated at our center due to CRC liver metastasis between 2008 and 2017 were included in the study. Patients who were identified as peroperatively inoperable were excluded. Demographic characteristics of the patients, characteristics of the primary tumor, surgical treatment applied and survival data were retrospectively reviewed. Survival time was assessed by Kaplan Meier analysis.

**Results:** A total of 103 patients (69.9% male) underwent surgery for CRC liver metastasis. Median age was 60 (23-87). Primer tumor localization was the most common in rectum with 44.1%. Of the patients, 30.1% received neoadjuvant chemotherapy and 69.1% continued adjuvant chemotherapy. Segmentectomy and metastasectomy (40.8% and 40.1%) were applied to most of the cases and 15.5% were treated with lobectomy and 2.9% were treated with two-stage liver resection (ALPPS). Synchronous resection could be performed in 40 cases (38.8%). Only 2 patients (1.9%) developed early mortality. The mean survival was  $28.79 \pm 3.3$  months.

**Conclusion:** Surgical resection of liver metastases seems to be the most appropriate approach together with primary tumor in possible patients. In major hepatectomy candidates with limited liver volume, gradual liver resection is an option that should be kept in mind.

**Keywords:** Colorectal cancer, liver, metastasis

## PP-0641 [Hepatobiliary Surgery]

# Assessment of Treatment Outcomes of Non-Colorectal Liver Metastases

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**Objective:** The aim of this study was to evaluate the results of surgical resection and radiofrequency ablation (RFA) of patients with non-colorectal liver metastases.

**Material and Methods:** Three of 9 patients with non-colorectal liver metastasis underwent surgical resection and RFA, and 6 patients underwent open RFA under general anesthesia between January 2011 and December 2017. Patients were evaluated retrospectively according to age, gender, primary focus, pathology outcome, lesion localization, lesion diameter, number of lesions, number of procedures, complications, treatment outcomes and survival.

**Results:** Eight of the patients were female and 1 of them was male, the mean age of the patients was 51.2 (37-74), the total number of lesions was 55 (1-22) and the mean lesion diameter was 2.8 cm (1-19 cm). All patients were evaluated with pre-operative three-phase contrast-enhanced liver CT. Localization of the lesions was right lobe in 3 patients and bilobar in 6 patients. There was a single lesion in 1 patient, 3 and more lesions in 8 patients. Seven patients had breast ca metastasis and 2 patients had neuroendocrine metastasis. Preoperative tumor markers were normal in all patients. One of the 3 patients who underwent surgical resection had extended right hepatectomy, 1 had non anatomic resection, 1 had left hepatectomy. Simultaneous RFA therapy with USG was also performed by interventional radiologist because of the presence of other metastatic lesions in the liver of the patients. Six patients with bilateral intra-parenchymal lesions underwent open RFA treatment. In total, 6 lesions were surgically resected and 49 lesions were made RFA procedure. Postoperative transient bilirubin and INR elevation were observed in one patient who underwent extended right hepatectomy and no complication was observed in other patients. Six of the patients had preoperative chemotherapy. All patients, except the male patient with neuroendocrine metastasis, received postoperative chemotherapy. Three-phase contrast-enhanced dynamic liver CT or magnetic resonance imaging was performed to determine the postoperative operative therapeutic efficacy. Total ablation was achieved in 47 of 49 lesions for which RFA was performed. RFA procedure was repeated in 1 patient with new lesion in the liver in follow-ups and 2 lesions with partial ablation. A male patient with neuroendocrine metastasis died after one year due to heart failure. A patient with breast ca metastasis died because of distant metastases. Follow-up and treatment of seven female patients continue (range 5-1 year).

**Conclusion:** We think that surgical resection and RFA treatment in appropriate patients have positive contribution to survival time although the data about surgical resection and RFA treatment results of non-colorectal liver metastases without systemic spread are limited. RFA is being performed in patients with bilobar located metastatic liver tumors and high-risk patients because

of the preservation of intact liver tissue, direct treatment of the tumor, and low rates of mortality and morbidity compared to other treatments.

**Keywords:** Non-colorectal cancer, liver metastasis, resection, radiofrequency ablation

## PP-0642 [Hepatobiliary Surgery]

# Determination of Optimum Duration and Timing of Intermittent Clamping and Ischemic Preconditioning in Experimental Major Liver Surgery

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**Objective:** The aim of this study was to determine the optimal intermittent clamping time and timing in experimental liver major resection, which provides the best protection in liver function and histomorphology after ischemia reperfusion injury.

**Material and Methods:** In this study, 80 male Wistar-Albino rats were used. The experimental animals were divided into 5 groups of 8 rats. Groups were subjected to a total of 60 minutes of clamping at intervals of 10 minutes, 20 minutes 30 minutes and 60 minutes. Blood and tissue specimens were taken twice at 3rd, and 24th hours in each group. After clamping, the left lateral lobe and left median lobe (approximately 40% liver tissue) were resected. Blood and tissue specimens were taken at 3rd and 24th hours of reperfusion.

**Results:** TNF-alpha Eliza, IL6 Eliza, ALT, AST, LDH, total bilirubin and direct bilirubin levels were measured in blood samples taken from rats. Tissue specimens were examined in the pathology clinic for apoptotic cell count by TUNEL method and general liver damage score by H & E staining. The results of intermittent clamping groups were compared in terms of statistical significance within the sham group and within themselves. In this study, no statistically significant difference was found in pathological evaluation between groups. The ALT and AST values were statistically high in the 10 min clamping group in the late period. There was a statistically significant elevation in TNF-alpha and IL-6 values in 60 min group in the early period however while there was a decrease in 60 min and sham groups in the late period, there was a statistically significant elevation in intermittent clamping groups.

**Conclusion:** We conclude based on the results obtained that 30 minutes of clamping time may be more appropriate when evaluated with intraoperative hemorrhage and duration of operation. Further studies are needed to determine the effect mechanism of and the mode of application of ischemic preconditioning acting on many different pathways and different enzymes, proteins and receptors.

**Keywords:** Ischemic Preconditioning, ischemic preconditioning with intermittent clamping, liver ischemia reperfusion damage

## PP-0643 [Hepatobiliary Surgery]

# Is Calcification of the Cyst Wall a Definite Sign of Death in Cyst Hydatid Disease of Liver?

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**Objective:** The presence of calcification on the cyst wall in hydatid disease of the liver is considered to be an indication of inactivity of the cyst. In this patient group "follow-up" is a common practice instead of surgery. In this study, we wanted to investigate whether determination of calcification in the hydatid cyst wall of the liver by imaging methods is an indication of inactivity of the cyst or not.

**Material and Methods:** The files of patients who had calcification on the cyst wall and operated between January 2005 and February 2018 were retrospectively reviewed in our clinic. The patients in whom wall calcification was detected by radiological imaging or histopathologically were included in the study. Preoperative albendazole therapy (12-15 mg/kg/day) was initiated with establishment of diagnosis. The time passed until operation was 4-45 days. After surgery, albendazole treatment was cyclically completed to 6 months.

**Results:** Forty five (39,13%) cases with calcification on the cyst wall were detected. The mean age of the cases was found to be 47,68 (19-78). The female/male ratio of the cases was 26/19. There were 1 cyst in 28 cases (62.22%), 2 cysts in 13 cases (28.88%), 3 cysts in 3 cases (6.66%) and 4 cysts in 1 case (2.22%). The diameter of the cysts ranged from 1 to 16 cm. Distribution according to Gharbive World Health Organization classification was; type II-CE3 in 4 cases (8.88%), type III-CE2 in 14 cases (31,11%), type 4-CE4 in 22 cases (48,88%) and type V-CE5 in cases in 5 cases (11,11%). Two patients underwent PAIR 1 and 3 years before being admitted to our clinic. Both patients received albendazole treatment for one year. 39 cases underwent drainage + omentoplasty, 5 cases underwent pericystectomy and segmentectomy was performed in 1 case. It was seen in five cases that the cyst opened to the bile ducts. Rupture of the bile ducts was detected during surgery in 3 cases. The bile duct was sutured with choledochodendostomy in 2 of these cases and the bile duct where the cyst was ruptured was sutured in 1 case. Opening to bile ducts was detected in 2 patients with high flow fistula in the postoperative period and it was treated by ERCP. Intra-cyst infection was detected in 11 cases. Germinative membranes and/or daughter vesicles were not detected in 5 (11,11%) cases and were accepted as inactive cysts. It was seen in all other cases that there were daughter vesicles and/or germinative membrane.

**Conclusion:** After the Gharb classification in 1981 it was stated that calcification in the cyst wall is an indication of the inactivity of the cyst. Therefore, surgeons in the patient group with calcification on the cyst wall adopt conservative treatment methods rather than surgery in this group of patients. As we have seen in our study, calcification on the cyst wall does not mean that the cyst is inactive.

**Keywords:** Liver cyst hydatid, calcification, infection, dead cyst

## PP-0644 [Hepatobiliary Surgery]

# A Rare Pancreatic Pathology; Hemangioendothelioma

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**Introduction:** A case of hemangioendothelioma (HE), a rare pancreatic pathology, is presented in a patient with intraabdominal mass. It was aimed to draw attention to this rare pathology and location in the differential diagnosis of abdominal masses.

**Case:** A 24-year-old female patient was evaluated at the external center for 2 years due to ongoing abdominal pain and dyspeptic complaints. An intraperitoneal mass, 12x10x9.5 cm in diameter adjacent to the head of the pancreas located in the inferior part of the liver, displacing the 2nd and 3rd parts of the duodenum to posterior and displacing the intestinal segments in its neighborhood to posterolateral, was found in the dynamic magnetic resonance (MR) examination.

No pathological finding was found in physical examination of our patient. Upper and lower gastrointestinal endoscopy and thorax computerized tomography (CT) examinations of the patient with normal laboratory parameters were also normal. Abdominal CT revealed a lobulated contoured, intraperitoneal, solid, heterogeneous, mass having a size of 105x93x82 mm, with apparent contrast enhancement and multiple necrotic areas was observed in the anterolateral vicinity of the pancreatic head. Although, the findings were firstly interpreted in favor of neuroendocrine tumors originating from pancreas, gastrointestinal stromal tumor or paraganglioma originating from duodenum was also considered. A solid mass localized to the posterolateral of duodenum, about 12-14 cm in diameter was observed at laparoscopic exploration. It was seen that the lesion was a mass with exophytic growth pattern which did not invade neighboring structures originating from the pancreas neck in the evaluation made by switching to the open procedure for detailed exploration. The mass was excised with respect to the strict surgical margin. HE diagnosis was established in postoperative pathological evaluation.

**Conclusion:** HEs are intermediate class vascular tumors. The recurrence or metastatic potentials are very low. They may occur in many organs such as skin, liver, spleen and salivary glands. Localization in pancreas is very rare for HE. Patients usually present with nonspecific symptoms such as abdominal pain, jaundice, hepatomegaly, palpable mass or obstruction. Radiological differential diagnosis has some limitations, especially in lesions with close neighborhood relationship. The imaging findings of HE are similar to hemangioma except for the local invasive feature. There is no consensus regarding the procedure although the treatment is surgical. Resections that take into account intact surgical margins may be sufficient because of minimal local invasive properties, low recurrence and potential for metastases. The typical histological findings of HE are vascular structures containing erythrocyte in the lumen having diameters close to each other, and laid with bulged endothelium. It reacts immunohistochemically, with endothelial markers such as CD31, CD34 and Factor VIII antigen. In addition to capillary forming cell proliferation in our case, detection of positivity with CD34 and Factor 13a indicates an endothelial origin. As well as being a rare pathology, patients' tumors may not be diagnosed until massive masses are formed due to behavior pattern of the tumors. It should be kept in mind that this pathology may also be located in rare locations such as the pancreas in clinical practice and the surgical procedure should be determined according to the invasion state of the disease.

**Keywords:** Hemangioendothelioma, pancreas, intraabdominal mass

## PP-0645 [Hepatobiliary Surgery]

# Endoscopic Treatment of Infected Hydatid Cyst with Rupture Into Biliary Tracts

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**Objective:** Liver cyst hypertrophy is a serious public health problem in endemic areas. Many complications related to liver cyst hydatid can be seen. The most common one is the rupture of the cyst into the bile ducts. The findings of liver abscess and cholangitis occur after rupture into the bile ducts. We aimed to present the efficacy of endoscopic treatment in the cases who were admitted to our clinic with liver abscess and cholangitis findings.

**Material and Methods:** We retrospectively reviewed the data of 11 patients who had liver cyst hydatid diagnosis between 2010 and 2017 who were hospitalized with liver abscess and cholangitis diagnosis and who underwent endoscopic treatment for rupture into the bile ducts in our clinic.

**Results:** Seven of the patients were male and 4 were female and the mean age was 43.5 years. The location of the liver cysts was observed as 5 of them in the right lobe and 6 of them in the left lobe. The mean diameter of the cysts was found to be 6.63cm (2.5-10cm). ERP procedure was performed in the patients at an average of 3.18 times (2-8). Drainage of the abscess was performed internally in patients who underwent drainage and stenting in the first procedure, then in the second procedure, the stent was removed and the treatment was completed. Nasobiliary drainage and drainage was performed washing the cyst cavity during ERP procedure in one patient. Surgical drainage was performed due to sepsis in one patient. The mean hospital stay was detected as 11.18 (2-34). While the mean follow-up period was 17 months, recurrence developed in one patient and the patient was treated with percutaneous drainage.

**Conclusion:** ERCP plays an active role in the treatment of ruptured hydatid cysts in the bile ducts. Endoscopic drainage is an applicable treatment method in complicated and infected cysts ruptured in biliary tracts.

**Keywords:** Endoscopy, cyst hydatid, ERCP

## PP-0646 [Hepatobiliary Surgery]

# The New Diagnosis Ruptured Giant Cyst Hydatid with the Findings of Acute Abdomen

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**Introduction:** Cyst hydatid (CH) is a zoonotic disease that causes severe economic loss caused by echinococcus granulosus. In this study we present a newly diagnosed ruptured giant hydatid cyst case with abdominal computed tomography (CT) in a patient who was admitted to the emergency service with abdominal pain and considered acute abdomen.

**Case:** A 28-year-old female patient presented with severe abdominal pain, which started immediately 5-6 hours before and she stated that it was effective on all quadrants. There was no known disease, operation history or drug use. There was tenderness in all quadrants and defense and rebound were positive in abdominal examination. The leukocyte count in the laboratory values was measured as 11400/µL; other laboratory values were normal. Abdominal CT was performed in the patient who had diffuse fluid in all quadrants in abdominal ultrasonography (USG). In CT performed it was stated that there was type 3A CH completely covering the left lobe of the liver, germinative membrane was seen in the cyst and there was diffuse fluid in the cyst. Emergency laparotomy was planned for the patient with current examination findings and CT outcome. The abdomen was opened with supraumbilical midline incision. About 2 liters of biliary fluid was seen at exploration and was aspirated. A 20x15x12 cm CH filling almost the entire left liver lobe that still had active leakage from the rupture site was seen. After the content of the cyst in the abdomen was aspirated, compress and gauze impregnated with 20% NaCl were placed around the liver. Then part of the cyst wall was excised and opened wide and partial cystectomy was performed. The entire germinative membrane was removed from the cyst. Cystobiliary connectivity presence was tested with white gauze placed in the cyst cavity. The cystobiliary connections detected at three different points were closed with 4/0 prolens. Omentum was detected in the cyst cavity and omentopexy was applied. The operation was terminated by placing 1 drain both in the cyst cavity and in the abdomen. In the postoperative period, bile was observed from the drain in the cavity. The daily flow was between 500-600 cc. The patient underwent endoscopic retrograde cholangiopancreatography (ERCP),

sphincterotomy and a stent was placed in the choledoch. After ERCP, the bile leakage was completely cut off. Drains were withdrawn in the following days and the patient was discharged with albendazole treatment on the 10th postoperative day. Stent was taken with ERCP one month later. No problems were detected at the outpatient clinic follow-ups.

**Conclusion:** Cysts hydatidic patients without specific symptoms may be diagnosed when they are admitted with complications, as in our case. Rupture is a serious complication, especially in large hydatid cysts. In these types of cases, anaphylaxis can occur and cause a mortal picture; it is necessary to be careful in this regard. Hydatid cyst cases that develop intraabdominal rupture may have recurrence in time; patients should be warned and closely monitored.

**Keywords:** Cyst hydatid, abdominal pain, peritonitis, rupture

## PP-0647 [Hepatobiliary Surgery]

# Stone Treatment with Percutaneous Hepatolithotomy with Minimal Dilatation in Patients Having Multiple Hepatolithiasis

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Intrahepatic stones cause serious morbidity and mortality. Apart from open surgical methods for the purpose of treatment, biliary decompression, endoscopic or percutaneous methods are used to remove stones in the bile ducts. It is very difficult to apply a new surgical procedure after repeated treatment interventions. Therefore, we aimed to demonstrate that intrahepatic stones can be removed with hepatolithotomy by interventional radiology guided percutaneous penetration to the bile duct, inspired by the application of percutaneous nephrolithotomy to reduce the complications.

Hepatolithotomy procedure was applied to 2 male and 1 female patients aged 26, 39 and 77 who had previously undergone different surgical procedures due to hepatobiliary diseases. It was determined that the female patient at 2 months of age underwent Kasai operation and then cholecystectomy and percutaneous or endoscopic interventions due to recurrent cholangitis. Male patients were found to have undergone bilioenteric procedures for choledoch stone 3 and 10 years ago. It was seen in the controls that there were multiple stones proximal to the anastomosis.

It was decided to apply hepatolithotomy with percutaneous intervention with urology and interventional radiology departments with a multidisciplinary approach. Intrahepatic stones were imaged under general anesthesia with a Chiba needle inserted into the left intrahepatic duct and an 8F rigid or flexible pediatric cystoscope inserted. Subsequently, the stones were broken with pneumatic lithotripter and the canals were cleaned. Cholangiograms showed that the contrast passage was smooth and there were no stones in the canals. Biliary drainage catheter was placed for drainage and the procedure was terminated. Postoperative follow-ups showed that intrahepatic stones were completely removed and biochemical parameters were normal.

The purpose of hepatolithiasis treatment is to prevent the ongoing infections, recurrent cholangitis and hepatic fibrosis and the development of cholangiocarcinoma. The treatment to be applied in patients with symptomatic hepatolithiasis should be decided after careful examination of the age, performance status, general condition and stone location of the patient.

While hepatectomy was the main treatment method for these patients, it is not recommended as the first choice treatment method in patients undergoing surgery. Extracorporeal shock wave lithotripsy (ESWL) results in patients with hepatolithiasis are unsatisfactory. It has been reported in the literature that intrahepatic bile ducts of a few cases have been cleaned by percutaneous intervention, endoscopic instruments and various lithotripters (laser, electrohydraulic, pneumatic). The nephroscopes used are larger in diameter and rigid.

It is a safe and successful method to clean stones using small diameter instruments and pneumatic lithotripters by providing minimal dilation with percutaneous intervention in patients, whether having surgical history in bile ducts or not, with hepatolithiasis with excess stone load. We are of the opinion that application of the percutaneous hepatolithotomy procedure by surgeons, who are prone to percutaneous intervention and have gained experience in the field of percutaneous nephrolithotomy over the years, will reduce stonelessness and morbidity rates and increase surgical success.

The first case was presented as a video case presentation at the 21.European Society of Surgery (ESS 2017) congress.

In addition, it was presented with the title of "New surgical technique applied with urological instruments in bilobar multiple hepatolithiasis: Ultra-mini percutaneous hepatolithotomy" in the 2017; 43(3): 371-7 issue of Turk J Urol journal.

**Keywords:** Hepatolithiasis, percutaneous hepatolithotomy, endoscopy

## PP-0648 [Hepatobiliary Surgery]

# Approach to the Patient with Amphysematous Cholecystitis: Case Report

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**Introduction:** Amphysematous cholecystitis is a rare acute cholecystitis having a gangrenous course with gas formation in the gall bladder. It is the result of the secondary infection of gas-producing organisms on the sac wall. Clinical findings are similar to acute cholecystitis, but the onset is faster and louder. Sepsis findings can be added to the diagnosis. Cholelithiasis is seen in about half of the patients and most of them are diabetic. The treatment necessitates emergent operation since perforation and peritonitis may develop in patients having a gangrenous course. In this case report, we aimed to present our approach to a patient with gangrenous emphysematous cholecystitis, which is a case which should be treated immediately and which may result in death if not treated.

**Case:** A 80-year-old female patient was admitted to our clinic due to complaints of abdominal pain, nausea, vomiting, and fever. The patient has hypertension and diabetes mellitus diagnosis. Wall thickness of the sac, leucocytosis and defense were detected in the abdomen. Medical treatment was preferred to invasive methods in the patient who was considered to have acute cholecystitis, because of her age and comorbidities. The patient was taken to emergent operation upon worsening of her clinic and laboratory findings, especially upon detection of increase of CRP and WBC. The patient underwent open cholecystectomy and was discharged on the fifth postoperative day without any complication.

**Conclusion:** Amphysematous cholecystitis is a rare acute cholecystitis with clinical course ranging from gangrenous to peritonitis or even mortality. Gangrenous cholecystitis should be considered primarily and surgical treatment should be kept in the forefront in acute cholecystitis patients whose WBC, among laboratory values, is doubled daily and the sedimentation rate is above 100 mm/hr.

Therefore, acute cholecystitis episodes of elderly and diabetic patients should be evaluated in this respect and treatment and care should be considered multidimensionally. We think that open surgery will be more suitable for colocystitis, especially for infected, abscessed and necrotic colocystitis.

**Keywords:** Amphysematous cholecystitis, cholecystectomy, case report

## PP-0649 [Hepatobiliary Surgery]

# Do Percutaneous Cholecystostomy and Delayed Laparoscopic Cholecystectomy Increase Complications in the Treatment of Acute Cholecystitis?

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**Objective:** Although standard treatment of acute cholecystitis is early laparoscopic cholecystectomy (ELC), percutaneous cholecystostomy and delayed laparoscopic cholecystectomy (PCDC) are performed in patients with high surgical risk. We haven't encountered any study in the literature comparing early cholecystectomy with delayed laparoscopic cholecystectomy after percutaneous cholecystostomy in patients with acute calculous cholecystitis. ELC and PCDC were compared in terms of complications, conversion to open surgery, duration of hospitalization and mortality.

**Material and Methods:** The files of 225 patients with acute calculous cholecystitis according to TG13 criteria admitted in Konya Training and Research Hospital between January 2012 and December 2017 were examined. Eighty-eight patients who underwent open cholecystectomy, late cholecystectomy after medical treatment, or having missed data in their files were excluded from the study. Eighty-seven patients who underwent ELC and 61 patients (PCDC) who underwent laparoscopic cholecystectomy 6-8 weeks after percutaneous cholecystostomy were included in the study. The two groups were compared in terms of demographic characteristics, ASA score, operative time, conversion to open surgery, complications and mortality.

**Results:** 77 (55.4%) of the 139 patients, included in the study, were female and 62 (44.6%) patients were male. There was no gender difference between the two groups ( $p > 0.05$ ). Median age was 60.5 (29-81), 75 (56-87) in the ELC and PCDC groups, re-

spectively. Age was significantly higher in the PCDC group ( $p < 0.05$ ). The ASA score was higher in the ELC group. The durations of operation in the ELC and PCDC groups were  $62.50 (\pm 12.56)$  and  $67.78 (\pm 12.66)$  minutes respectively and significantly longer in the PCDC group ( $p < 0,05$ ). In the ELC group conversion from laparoscopic to open surgery took place in 8 (10.3%) cases. Six of them underwent cholecystectomy and 2 cases underwent open cholecystostomy. Bismuth Type II injury was detected in 1 (1.3%) patient and hepaticojejunostomy was performed in the postoperative period. Postoperative bleeding in two (2.6%) patients, and superficial surgical site infection in 3 (3.8%) patients developed and were treated conservatively. Two (2.6%) patients died in the early postoperative period due to comorbid diseases. Percutaneous cholecystostomy failed in 3 (4.9%) patients in PCDC group and open cholecystectomy was performed in these patients. Surgical procedure was switched to open surgery in five (8.2%) patients. Postoperatively, bronchopneumonia in 3 (4.9%) patients and deep vein thrombosis in 1 (1.6%) patients developed and were treated medically. Five (8,2%) patients died due to comorbid diseases. There was no statistically significant difference in switching to open surgery, complication and mortality between the two groups ( $p > 0,05$ ).

**Conclusion:** Percutaneous cholecystectomy is an applicable treatment with high success rate and similar morbidity and mortality rates with early laparoscopic cholecystectomy in patients, having acute calculous cholecystitis, who cannot be operated due to high surgical risk in early period.

**Keywords:** Acute calculous cholecystitis, Laparoscopic cholecystectomy, Percutaneous cholecystostomy

## PP-0650 [Hepatobiliary Surgery]

# Is laparoscopic Surgery Safe in Ventriculoperitoneal Shunt Cases?

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**Introduction:** Patients with hydrocephalus can live for longer years with the progression of ventriculoperitoneal shunt (VPS) techniques, and thus can come up with different diseases in adult age groups. In this process, the use of laparoscopic surgery as gold standard method in many surgeries leads to the use of laparoscopic surgery in patients with VPS as well. The first complication that comes to mind in laparoscopic surgical procedures to be applied in patients with VPS is an increase in intracranial pressure due to pneumoperitoneum. Another problem that can be encountered in post-operative periods is shunt infection. Reflux has been shown to be minimal even when the intra-abdominal pressure is increased to 80mmHg, since the shunts have a one-way and 300mmHg pressure resistant valve system. It was concluded in the studies performed that the laparoscopic surgery with routine general anesthesia was safe in VPS patients. We aimed to present our experience of laparoscopic cholecystectomy in a patient with VPS.

**Case:** A 32-year-old female patient was admitted to our clinic with pain in the right upper quadrant in the physical examination. In the investigations, WBC value of the patient was 13.9 mm<sup>3</sup> and her biochemical parameters were normal. Ultrasonography of the patient showed increased bile wall thickness and multiple millimetric stones and plastering pericholecystic fluid. As learned from her anemnesis, ventriculoperitoneal shunt was inserted into the abdomen from the right parietal bone due to hydrocephalus at the age of 6 years and then it was revised at the age of 12 due to shunt dysfunction and changed by inserting it from the left parietal. The patient whose findings regressed with antibiotic and supportive fluid treatment was discharged and elective cholecystectomy was scheduled 6 weeks later. Laparoscopic cholecystectomy under intra-abdominal pressure of 13mmHg under routine general anesthesia was performed in the patient who was evaluated by Pre-operative Brain Surgery Department and no contraindication was detected. Prophylaxis was conducted with 1 gram of cefazolin i.v. diffuse intraabdominal adhesions that were considered to be related with previous VPS interventions were detected in the operation. The flow of the cerebrospinal fluid from the shunt tip was observed in the operation. Intracranial pressure monitoring or shunt clamping was not applied. No complication related to the shunt developed in the patient who was discharged with healing on the first postoperative day.

**Conclusion:** Laparoscopic surgery is a safe method in patients with VPS if the shunt functions normally. Keeping the intraabdominal pressure around 13-15 mmHg in operation and keeping the operation time as short as possible will reduce the risk of increase in intracranial pressure.

**Keywords:** Intracranial pressure, laparoscopy, ventriculoperitoneal shunt

## PP-0651 [Hepatobiliary Surgery]

# Effect of Angiogenic and Antiangiogenic Factors on Prognosis in Hepatocellular Carcinoma

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**Objective:** Hepatocellular carcinoma is the 5th most common cause of cancer-induced mortalities. Resection in hepatocellular carcinoma is the first choice in appropriate patients. In this study, it was aimed to analyze the hepatocellular carcinoma operations performed by one team in a university hospital and to evaluate the relationship between survival and positivity of endostatin, VEGF and hepatitis serology.

**Material and Methods:** The data of 53 patients who underwent HCC surgery between January 2000 and December 2015 were evaluated retrospectively. Male/female ratio was 3/1 and median age was 63 (range: 16-82). Hepatitis C in 11 patients and Hepatitis B serology in 23 patients were positive. Tumor was located in right lobe in 23 patients, and bilobar in 7 patients. In 29 patients, the AFP value was above normal. VEGF and endostatin immunohistochemical staining patterns of the resection material of the patients were examined.

**Results:** Minor hepatic resections (nonanatomic,  $\geq 2$  segments) were applied in 26 of the patients. Five patients received simultaneous intraoperative ablative treatment. The average tumor diameter was found as 5.9 cm. Liver parenchyma histology showed cirrhotic features in 12 patients. Median duration of hospital stay was 6 days (range: 3-51). Major complication (liver failure, biliary leakage) rate was 12% and mortality rate of 30 days was 6.7%. The median overall survival was found as 62 months (range: 46-78). Hepatitis C positivity was found to be a poor prognostic factor while there was no correlation between survival and endostatin and VEGF in the correlation analyzes (p: 0,02).

**Conclusion:** It was seen that hepatic resection in hepatocellular carcinoma was a safe and effective treatment option. While there was no correlation in this series between endostatin and VEGF prognosis, it was observed that positivity of Hepatitis C affected survival negatively.

**Keywords:** Hepatocellular carcinoma, VEGF, endostatin, hepatitis B, hepatitis C

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## PP-0653 [Hepatobiliary Surgery]

# Effects of Xanthogranulomatous Cholecystitis on Morbidity in Laparoscopic Cholecystectomy

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**Objective:** Xanthogranulomatous cholecystitis is a rare inflammatory disease of the gall bladder characterized by a focal or diffuse destructive inflammatory process and accumulation of lipid-laden macrophages, fibrous tissue and acute and chronic inflammatory cells in the bile duct wall. Laparoscopic cholecystectomy is the gold standard method for benign gall bladder diseases that require surgery. In this study, the effect of xanthogranulomatous cholecystitis on the problems encountered in the case of laparoscopic cholecystectomy in a training clinic during the branching phase was investigated.

**Material and Methods:** Laparoscopic cholecystectomy operations and pathology results were recorded in our center through the hospital information processing system between 2009 and 2017. Operative notes and postoperative clinical course of the patients whose pathologies were reported as xanthogranulomatous cholecystitis were evaluated.

**Results:** A total of 4744 patients (3225 women, 68%) and 1519 men (32%) were electively operated. Open cholecystectomy was preferred due to necessity of upper abdominal incisions or choledoch exploration due to previous operations in thirty seven (0.7%) patients. The remaining 4707 patients were treated laparoscopically. Despite provision of successful laparoscopic exploration in all of the planned laparoscopic procedures, it was necessary to return to laparotomy in 72 (1.5%) patients. Pathologic examination revealed xanthogranulomatous cholecystitis in 42 (58%) patients in whom it was switched to open cholecystectomy. It was switched to laparotomy due to inability to control bleeding in 4 cases, bile duct injury in 3 cases, duodenal injury in 1 case and transverse colon injury in 1 case. The reason for switching laparotomy in 42 cases (78%) was the inability to reveal the anatomy. Frozen pathological examination preference of the surgeon due to suspicion of malignancy (focal wall thickness, appearance of invasive tissue in the liver bed etc.) in 12 of the patients was remarkable.

**Conclusion:** Morbidity values up to 30% after xanthogranulomatous cholecystitis are reported in the literature, and it continues to be an important risk factor to switch to open surgery due to malignancy-like features or difficulties that it creates in the dissection.

**Keywords:** Xanthogranulomatous, cholecystitis, cholecystectomy, switching to open surgery



## PP-0654 [Hepatobiliary Surgery]

## Place of Percutaneous Cholecystostomy in Acute Cholecystitis in Comorbid Patients

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Acute cholecystitis (AC) is among emergency conditions that general surgeons encounter frequently. The most appropriate treatment is laparoscopic cholecystectomy (LC); but other treatment methods may be applied in patients who cannot undergo surgery due to the high risk of morbidity and mortality. Percutaneous cholecystostomy (PC) is one of these alternative methods. This method can be used in cases where emergency surgery cannot be performed in patients in advanced ages and having comorbid diseases. Infection is controlled by drainage of gall bladder. Cholecystectomy can be performed in more favorable and elective conditions after percutaneous cholecystostomy. We present our experience of percutaneous cholecystostomy in elderly patients with high-risk, acute cholecystitis in this study. Medical records of all patients who underwent PC at our hospital between January 2012 and January 2018 were reviewed. Our study was approved by our hospital committee. Tokyo criteria for acute cholecystitis diagnosis and grading were used. Reasons for application of percutaneous cholecystostomy are comorbidities, age or duration of symptoms. PC application decision was made by the senior surgeon looking at the profit-loss ratio. All PC applications were performed by the same interventional radiologist with local anesthesia and ultrasonography. A total of 67 PC procedures were performed at our hospital during the specified study period. Thirty-eight of the patients (56%) were male and 29 (44%) of them were female patients and the mean age was 77.64 years (range, 41-96 years). All patients with percutaneous cholecystostomy were assessed as ASA values of 3 or 4. The success rate of percutaneous cholecystostomy was 100% and the complication rate was 2.4% (n=1). The drains were held in place for six weeks. Forty-two (62%) of 67 patients underwent surgery after drains were withdrawn in their follow-up. Only two (4.7%) of the surgeries were switched to laparoscopy. The remaining 25 patients (37.3%) were followed without surgery after the drains were withdrawn and there was no recurrence of any disease in their follow-up. PC can be safely applied when LC cannot be performed in elderly patients being admitted in emergency conditions with comorbid diseases and poor general condition. LC can be performed in appropriate patients after withdrawal of the drain, under elective conditions with an acceptable rate of 4.7% conversion.

**Keywords:** Acute cholecystitis, ASA score, cholecystostomy, elderly

## PP-0655 [Hepatobiliary Surgery]

## Laparoscopic Cholecystectomy Results in Geriatric Population

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Investigation of the incidence of morbidity and mortality following laparoscopic cholecystectomy in patients aged 65 years and older. Medical records of 297 patients aged 65 years and over who underwent laparoscopic cholecystectomy were retrospectively reviewed. A total of 297 patients, 202 males and 95 females, were included in this study with a mean age of 73.11 years. The indications for surgery were chronic cholecystitis in 237 patients (80%), acute cholecystitis in 43 patients (14.4%), cholelithiasis in 10 patients (3.3%) and biliary pancreatitis in 7 patients (2.3%). Eight patients (2.6%) required laparotomy. Patients with the American Anesthesiologists Association score III or IV had a higher postoperative complication frequency and longer hospital stay ( $p \leq 0.05$ ) than patients with the American Anesthesiologists Association score I or II. Advanced age is not a contraindication to laparoscopic cholecystectomy and laparoscopic cholecystectomy can be safely performed in elderly patients. However, the incidence of postoperative complications and the length of hospitalization increase with the increasing scores of the American Anesthesiologists Association.

**Keywords:** Laparoscopic cholecystectomy, elderly patients

## PP-0656 [Hepatobiliary Surgery]

## Hemangioma: A Disease that Should not be Overlooked

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A 39-year-old woman was admitted to the internal diseases outpatient clinic with complaints of lack of appetite for the last month, vomiting after each meal, weight loss and occasional fever. When the anemia and sedimentation elevation were detected in the routine examinations of the patient's outpatient clinic evaluation, the patient was admitted to the internal diseases service for further examination and treatment. She had no chronic illness history. She had anemia since mid-twenties. She had smoking habit and was feeding cats and dogs at home. There was no known disease in her family history. Physical examination revealed no pathology other than scleras, pale icteric conjunctivas, and hepatomegaly in the patient. The values in her examination were; BG: 95, Urea/Crea: 20/0.6, AST/ALT: 26/22 Na: 134, K: 4.32, Ca:8.2, ALP/GGT:249/76, Bil(T/D):1.3/0.39, Alb/Glb: 3/4.2, Sedim/CRP/Procalcitonin: 140/171.6/0.17, Hgb: 6.5 Rbc: 2.71 Hct: 20 Mcv: 73.7 Mch: 20 ferritin: 8 B12: 378. Celiac marker was detected as negative. The patient having anemia and sedimentation elevation in routine examinations was examined in terms of anemia. Scopies were planned for GIS scanning due to iron deficiency. Gastroscopy was evaluated as "a mass compressing gastric mucosa, the usual antrum". Serum Ig values in terms of anemia due to sediment elevation, inversion in the alb/globulin ratio, and myeloma were normal. There was no lytic lesion in the headgraphy. Bone marrow aspiration and biopsy were normal. The patient with fever and hepatomegaly were investigated for infectious agents. Laboratory examinations in terms of infections such as brucella, TORCH, Parvovirus, EBV, CMV, HSV1-2, Cyst HYDATIC HAV, HBV, HCV, HIV were performed. Ppd was checked. The patient was reevaluated with all the tests. No active infection was detected. CT for malignancy examination was conducted. Liver was bigger than normal(23cm) in abdominal CT. In the liver, a massive lesion consistent with hemangioma was observed with a heterogeneous internal structure of approximately 10 \* 7.5 cm filling the left lobe. There was compression on the stomach from the anterior and the stomach had a collapsed appearance. The patient being reported as "Heterogeneous internal structure filling the left lobe of the liver, massive lesions with hemorrhagic foci in the internal structure, having signal characteristics consistent with hemangioma, multiple hemangiomas scattered in the right lobe of the liver with a tendency of combining with each other" was referred to the gastroscopy council and the patient was taken over by general surgery for left hepatectomy. There were no malignancies in the pathology reports of the patient evaluated in outpatient clinic follow-ups after hepatectomy. The patients complaints regressed. Sedimentation dropped to normal values.

**Keywords:** Hemangioma, liver, malignancy

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## PP-0657 [Hepatobiliary Surgery]

# Başkent University Istanbul Health, Application and Research Center 5-Year Cholecystectomy Results

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A total of 918 patients undergoing laparoscopic cholecystectomy between January 2013 and January 2018 were examined. Age, sex, early and late complication rates, rate of switching from laparoscopic to open surgery, and switching reasons were determined. 810 patients had chronic cholecystitis (88.3%), 65 patients had acute cholecystitis (7.1%), and 43 patients had gall bladder polyp (4.6%). ERCP was performed in 94 patients due to mechanical incision. The rate of switching to Open surgery was 3.5% (32/918). The difficulty in dissecting the calot triangle and different anatomies were the main reasons switching to open surgery. The mortality rate was 0% and the morbidity rate was 7.7% (70/918). Incisional hernia occurred in four cases, and sac perforation took place during the operation in 65 cases (7.1%). There was a subcutaneous infection in 18 patients. Cholecystectomy can be safely performed with the condition of obeying the rules with open or laparoscopic methods.

**Keywords:** Cholecystectomy, laparoscopic, safe technique

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## PP-0658 [Hepatobiliary Surgery]

# Management of a Spontaneously Perforated Liver Abscess Case Developed Secondary to Cyst Hydatid

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**Introduction:** Cyst hydatid is a parasitic infestation caused by *Echinococcus granulosus*. Although the disease is usually asymptomatic, the development of abscess due to the connection with intrahepatic bile ducts especially in large cysts, and the rupture that can develop secondary to it are the causes of acute abdomen which must be kept in mind.

**Case:** Physical examination of a 62-year-old male patient who was admitted due to diffuse abdominal pain, impairment of general condition and mental fog had a blood pressure of 70/40 mmHg and a pulse of 144/min. There were tenderness, defense

and rebound in all the quadrants of the abdomen. It is learned from his history that the patient was examined in the Department of Medical Oncology with a pre-diagnosis of malignant mass in the liver. The laboratory values of the patient were Hb 13 g/dL, leukocyte 10,600/mm<sup>3</sup>, platelet 272,000/mm<sup>3</sup>, ALT 20 U/L, AST 26 U/L, ALP 230 U/L, GGT 401 U/L, CRP 220 mg/dl. The patient was taken to the operation since right hemidiaphragm in the posteroanterior chest x-ray of the patient was elevated and computed tomography showed cystic lesions with a size 98x100 mm, in the right lobe of the liver in the posterior segment and with a size of 68x71 mm with thick wall in the anterior segment consistent with abscesses with occasional air values and due to observing diffuse intraabdominal free fluid and acute abdominal findings. It was observed intraoperatively that the cyst in the anterior of the right lobe was perforated. The germinative membrane and abscess material separated from both cysts were drained. Packing was performed to the pouches of both cysts because of the serious bleeding from the drained cysts. Intravenous meropenem therapy was initiated. The patient followed up entubated with an open abdomen in the intensive care unit and when the patient was taken to the operation again after 24 hours, it was observed that the bleeding stopped but there was significant bile drainage from both cysts. The cystic bile leaks that could be seen were sutured and pezzet drain was inserted into the cyst pouches. The patient in whom nasobiliary drain was placed due to lack of decrease in bile drainage, which was about 800 cc/day from the drains in the cyst, was discharged with healing on the postoperative 18 th day with mebendazol treatment.

**Conclusion:** Hydatid disease of the cyst is located in liver at a rate of 50-70%. Although most cases are recommended to be followed by medical treatment, there is indication of operation in cysts which are superficial and larger than 10 cm, including multiple daughter vesicles and having a risk of rupture spontaneously or due to trauma in liver, infected cysts, cysts related to bile duct, and cysts making compression to the peripheral organs. The probability of developing a biliary fistula is 2.6-28.6% in those treated with surgery. According to the records of the Ministry of Health, an average of 3257 hydatid cyst operations were performed annually between 1990 and 2005. The estimated number of operated cases is 0.87-6.6 in 100.000. Cyst hydatid should be considered in the prediagnosis in patients in whom mass is observed in the liver and abscess in the liver is suspected. It should not be forgotten that the large cysts are infected due to the connection with the bile ducts and may be transformed into the liver abscess. Damage control surgery approaches such as packing and intensive care follow up with open abdomen in the management of patients' surgical treatment should be kept in mind.

**Keywords:** Acute abdomen, *Echinococcus granulosus*, liver cyst hydatid

## PP-0659 [Hepatobiliary Surgery]

# The Role of Drain in Shoulder Pain after Laparoscopic Cholecystectomy

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**Objective:** Laparoscopy and minimally invasive surgical techniques are preferred in our clinics for many reasons, and less pain in the postoperative period is one of the most important factors in accelerating the healing process. Laparoscopic cholecystectomy is a frequently performed surgical procedure in the general surgery clinic practice, but post-operative abdominal pain and shoulder pain are common symptoms. The aim of this study was to investigate whether the development of abdominal and shoulder pain after laparoscopic cholecystectomy is associated with parameters such as the amount of gas remaining in the abdomen and the use of drains after the pneumoperitoneum.

**Material and Methods:** Patients, who underwent elective laparoscopic cholecystectomy in the General Surgery Department of the Health Sciences University Haseki Training and Research Hospital between March 2017 and June 2017, were included prospectively consecutively without randomization after obtaining the approval of the Haseki Training and Research Hospital Ethics Committee. The patients were divided into 3 groups postoperatively according to drain usage. Group 1 was the patients for whom drain was used, Group 2 was the patients using aspirative drainage, Group 3 was the patients for whom free drainage was performed. All patients were evaluated preoperatively with Lovibond's Depression Anxiety Stress Scale (DASS). All patients underwent surgery with pneumoperitoneum applied under 14 mmHg pressure under standard general anesthesia. Demographic data, height, weight, ASA scores, duration of operation, pneumoperitoneal time, comorbid diseases, complications of all the patients and whether additional analgesic except routine analgesic treatment was needed or not, duration of hospital stay and peroperative surgical findings were recorded. All patients received standard analgesic treatment after surgery. Shoulder and abdominal pain of the patients were defined separately at the 6th and 24th hours postoperatively using Visual Analog Scale (VAS). The patients' data were recorded by the assistants, and the operators of the cases were not informed about the data.

**Results:** The mean age of the patients was 49.9±12.7 and the F/M ratio was 75/23. Mean duration of operation was 62±27, pneumoperitoneal time was 48±24. There were 31 patients in Group 1, 35 patients in Group 2, and 32 patients in Group 3. There were no significant differences between the 3 groups in terms of age, gender, BMI, duration of operation, duration of pneumoperito-

neum, surgical findings (degree of difficulty), and DASS scores. No difference was detected between the 3 groups in terms of 6th hour abdominal pain, 24th hour abdominal pain and 24th hour shoulder pain. The 6th hour shoulder pain scores was lower in the group without drain and the difference was statistically significant.

**Conclusion:** Shoulder pain after elective laparoscopic cholecystectomy is a common finding. According to the results of this study, it was determined that shoulder pain was less seen in patients who did not use drains regardless of the type of drain. We believe that postoperative pain control should also be considered when deciding on indications for drain use.

**Keywords:** Laparoscopic cholecystectomy, shoulder pain, drain usage

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## PP-0660 [Hepatobiliary Surgery]

# Incidental Portal Vein Aneurysm: Case Report

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**Introduction:** The portal vein aneurysm was first defined by Barzilai and Kleckner in 1956, and fewer than 200 cases have been reported since that date. Portal venous aneurysms are rare, usually asymptomatic, and are detected incidentally in routine imaging studies. They constitute approximately 3% of all venous system aneurysms. While most of the aneurysms are extrahepatic, they are rarely found in intrahepatic branches. The etiology of portal vein aneurysms is not fully understood, but two forms are defined as congenital and acquired. Acquired aneurysms are more frequent and are often associated with hepatic cirrhosis and portal hypertension. In our study, intrahepatic portal venous aneurysm originating from the portal vein left branch incidentally diagnosed in ultrasonography (USG) due to dyspeptic complaints in a 59-year-old female patient was presented.

**Case:** A lesion with a suspicion of portal venous aneurysm was observed in the USG performed for a 59-year-old female patient with dyspeptic complaints and nonspecific abdominal pain. The patient underwent computed tomography (CT). In CT, a lesion consistent with portal venous aneurysm was detected in liver segment 4 having a size of 52 \* 31 mm. Aneurysmal filling was confirmed with simultaneous Doppler USG. Abdominal magnetic resonance (MR) imaging revealed an aneurysmatic dilatation in the size of 53 \* 37 mm originating from the left portal vein. It has been seen that left segmental branches of the portal vein are continuous with aneurysmatic dilatation. CT sections of the lesion. There was no evidence of portal hypertension or liver cirrhosis in terms of clinical, radiological and laboratory findings. The patient was evaluated at the Hepatobiliary Surgical Multidisciplinary Council conservative treatment decision was made and the follow-up for the patient started. Currently, most of the information in the literature on portal venous aneurysms constitutes case reports or small series and is not based on evidence-based studies. Most of the portal vein aneurysms are detected incidentally and one third of them is asymptomatic. Approximately 50% of patients present with nonspecific abdominal pain complaints. Less than 10% of cases may present with symptoms such as gastrointestinal bleeding, portal hypertension or abdominal distension due to the compression of adjacent organs, and jaundice. The incidence of portal venous thrombosis can be up to 20%. The conservative approach in treatment is the best choice for most patients. Although surgery may be considered in postoperative rupture, thrombosis, or other symptomatic complications, post-operative mortality is quite high. Moreno et al. Recommend surgical treatment for extrahepatic aneurysms larger than 3 cm without thrombosis. Nevertheless, there is no definite evidence or comparative study confirming the indication for surgery.

**Conclusion:** Portal venous aneurysm is a rare vascular pathology. There are no controlled studies in the literature in terms of follow-up and treatment approaches of the cases. However, the general view is conservative approach and careful monitoring in asymptomatic patients. For this reason, patients diagnosed with portal venous aneurysm should be directed to specialized hepato-biliary centers and should be followed and treated here.

**Keywords:** Incidental, portal vein, aneurysm

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## PP-0661 [Hepatobiliary Surgery]

# Choledochal Cyst: A Disease not to Be Forgotten in Acute Cholecystitis Surgery

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**Introduction:** Acute calculous cholecystitis is the leading cause of bile duct disease requiring urgent surgical intervention. Patients frequently present with right upper quadrant pain, nausea, vomiting and distention to the emergency service. Although surgical intervention is often completed laparoscopically, open surgery should not be avoided when necessary. Here, we wanted

to present the case being admitted with acute calculous cholecystitis picture and who was seen to have 2 choledochal cysts during surgery and to summarize the literature of similar cases.

**Case:** A 76-year-old male patient presented with recurrent cholangitis history and pain on the right hypochondrium for approximately 6 months. Liver function tests revealed that normal serum total bilirubin level (1 mg/dL) and liver enzymes (serum AST, 58 IU/L, serum ALT, 46 IU/L, serum ALP, 125 IU/L) were elevated. Bile duct involvement and acute cholecystitis were detected in USG. The white blood cell level was 14.600. Emergency laparoscopic cholecystectomy was planned. It was observed at the exploration that the gall bladder was rudimentary, making intense adhesions to the omentum and stomach. When the dissection was continued, as the anatomical structures could not be revealed completely, it was switched to the open surgery. It was observed that the patient had a type 2 cyst in the choledoch. Cholecystectomy, choledoch cyst excision and primary repair were performed and the operation was terminated. The patient did not tell us but as far as we learned later, a stone was observed in the external center the patient was admitted with jaundice, right upper quadrant pain and cholestasis findings. The patient underwent ERCP and stone extirpation from the choledoch with sphincterotomy. In the meantime, the patient had juxtaposed papillary diverticulum and requested MRCP. However, the images of these examinations of the patient could not be obtained.

**Conclusion:** Accurate diagnosis and surgical treatment of choledochal cysts is important to reduce the risk of bile duct injury in acute cholecystitis emergency surgery, complete resection only takes place with surgical treatment. Long-term follow-up is necessary for postoperative risk of malignancy.

**Keywords:** Emergency surgery, acute cholecystitis, choledochal cyst

## PP-0662 [Hepatobiliary Surgery]

# A Rare Polypoid Lesion of Gall Bladder: Adenomyomatosis

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**Introduction:** Adenomyomatosis; is a hyperplastic disease of unknown etiology of gall bladder. Local muscle hypertrophy is present with intramural mucosal diverticulum formation (Rokitansky-Aschoff sinuses) which penetrate muscle layer of the gall bladder accompanied by thickening of the gallbladder wall or not. It is usually asymptomatic unless accompanied by a known illness. Ultrasonography (USG) is very valuable in differential diagnosis. The exact diagnosis is made only histopathologically. In this case report, we aimed to present a 42-year-old case with literature, in whom adenomyomatosis over 1 cm was detected in USG, with right upper quadrant pain and dyspeptic complaints

**Case:** A 42-year-old female patient was admitted to the outpatient clinic due to complaints of right upper quadrant pain and dyspeptic complaints. There was no pathological examination finding in the right upper quadrant except for minimal tenderness. Ultrasonography examination of the abdomen revealed a polypoid lesion with cystic areas in the gall bladder fundus, 12x8 mm in size adjacent to the wall, causing the appearance of comet-tail artifact. Laboratory tests were normal. The patient's polyp diameter's being 1 cm was asymptomatic in addition to increasing the risk of malignancy so the surgery decision was made. Laparoscopic cholecystectomy was applied to the patient. No complication occurred during the operation. The patient was discharged on the postoperative first day with healing by arranging diet. The diagnoses of chronic cholecystitis and adenomyomatosis localized in the gall bladder fundus were established as a result of histopathological examination.

**Conclusion:** As a result of the widespread use of abdominal ultrasound (USG), incidental detection of gall bladder polyps has increased. It occurs in about 5% of the population and can be premalignant lesion for gall bladder cancer in 3-8% of cases. Recently, the treatment of bile duct polyps has been decided by determining the polyp diameter ultrasonographically. While polyps larger than 1 cm are treated with cholecystectomy because of the risk of malignant transformation; polyps smaller than 1 cm are followed by clinical and recurrent USG. Ultrasonographic examination should be considered in the differential diagnosis because bile duct adenomyoma can be confused with malignant polyps.

**Keywords:** Adenomyomatosis, gall bladder, polyp

## PP-0663 [Hepatobiliary Surgery]

# 3D Model Application to Reduce Damage Risk in Gall Bladder Interventions

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**Objective:** Difficulties in the operations of patients may emerge in pathologies in gall bladder and bile ducts requiring surgical interventions due to anatomical variations. Manifesting bile duct patterns and forming a personalized treatment option, are important in terms of innovative operational strategies and preoperative planning. The treatment protocol may change according to the location, level and size of the pathology. For this reason, it was aimed to form 3 dimensional (3D) bile duct models of the patients and evaluate its possible contribution to the surgeon.

**Material and Methods:** 3D biliary drainage structures obtained by computed tomography imaging of 5 patients with different bile flow patterns were modeled three dimensionally using 3D modeling software.

**Results:** 3D modelling of the patients having variations in intrahepatic and extrahepatic bile ducts was made. In these models, the type of opening of each drainage type, shape, vascular characteristics, proximity to vascular structures were revealed on 3D models. Each of these features was used as an intraoperative reference. The patient was then operated and the intervention took place. The operation was thus observed to be more comfortable, shorter in duration, and the interventions were more controlled. 3D models have been instrumental in guiding the surgical planning of our patients and providing the control of the patient's condition.

**Conclusion:** Patient-specific biliary tract models increase the dominance of surgeons in complex anatomy and facilitate operations. It helps to evaluate the geometric change that the bile flow variation creates in the organs by creating individual patient models. 3D anatomical patient models can be used in new approaches in surgery, innovative operation strategies and preoperative planning.

**Keywords:** 3D, 3D model, biliary tract

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## PP-0664 [Hepatobiliary Surgery]

# A Case Report of a Rare Benign Liver Lesion: Foregut Cyst

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Liver foregut cyst is a rare congenital, solitary, non-neoplastic, and epithelial cyst of the liver. It is more common in males and usually asymptomatic. A 61-year-old female patient underwent laparoscopic right hemicolectomy due to right colon malignancy. Laparoscopic metastasectomy was performed upon detection of a lesion in the liver which was thought to be metastatic radiologically when she was followed by the medical oncology due to adjuvant therapy.

Pathologic evaluation was reported as foregut cyst. The differential diagnosis of foregut cyst, a benign liver lesion rarely seen, in our case is shared in the context of literature information.

**Keywords:** Benign liver masses, foregut, congenital liver

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## PP-0665 [Hepatobiliary Surgery]

# Conservative Approach to Biliary Duct Injury: Case Report

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**Introduction:** Laparoscopic cholecystectomy is still widely used in elective surgeries and laparoscopic surgeries of the general surgery. Laparoscopic cholecystectomy is an operation that can easily be done in almost every center today. The rates of biliary duct injury after laparoscopic cholecystectomy are inversely proportional to the experience of the surgeon. In this study we wanted to share our experience with a case in whom biliary duct injury was considered after laparoscopic cholecystectomy.

**Case:** A 31-year-old female underwent laparoscopic cholecystectomy under elective conditions at the external center. The drain placed in the sac pouch was withdrawn on the 3rd postoperative day upon observing no content coming from the drain and the patient was discharged. The patient was admitted to the same center with complaints of abdominal pain and distention. Mild

bilirubin elevation (1.61) and slight elevation in transaminases were detected in laboratory tests. Magnetic resonance cholangiopancreatography (MRCP) was performed upon absence of pathologic findings in the abdominal ultrasonography of the patient having WBC of 12300. It was reported in MRCP that the proximal of the choledoch was visualized but the distal part was not visualized. The patient who was thought to have bile duct injury was referred to our clinic. After the patient was hospitalized in our clinic, abdominal ultrasonography performed showed diffuse free fluid in Douglas. A percutaneous drainage catheter was then placed in the patient and the patient had approximately 1500 cc biliary fluid coming from the drain. Then endoscopic retrograde cholangiopancreatography (ERCP) was performed in the patient. It was observed in the ERCP that the opaque given in ERCP did not pass to the proximal and also the guide wire went out of the bile duct and a full thickness or partial biliary tract injury was considered as the preliminary diagnosis. The decision to place a percutaneous transhepatic catheter (PTC) in the patient was then made. It was entered to the duodenum with a transhepatic catheter placed percutaneously in the patient in the interventional radiology. One percutaneous catheter was placed in the same session to the lateral of the liver. The bile contents from the PTC of the patient increased while the bile from the drains of Douglas and liver lateral reduced and cut. Choledocheal stent over PTC was placed with ERCP in the patient who was followed almost 3 weeks. The treatment process of the patient, whose drain has been withdrawn, still continues in our unit.

**Conclusion:** Bile duct injuries are injuries requiring a multidisciplinary approach. We believe that unnecessary surgeries can be avoided in appropriate centers selected by multidisciplinary approach in experienced centers.

**Keywords:** Biliary tract injury, laparoscopic cholecystectomy, conservative approach

## PP-0666 [Hepatobiliary Surgery]

# Very Rare Case; Pancreatic Schwannoma

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A 70-year-old male patient had complaint of dark urine 4 months ago and recovered with the use of antibiotics. He was investigated further in the University hospital 10 days ago due to the complaints of severe pain, nausea, and urine thickening. No pathological finding was detected in abdominal CT except hydrops in gall bladder, dilatation of biliary tract and pancreatic duct, and suspicious lesion on pancreas. ERCP was performed 2 times and the choledoch can not be cannulated. The US performed in our center revealed hydrops at the gall bladder, biliary sludge in the sac, dilatation up to 18 cm in the choledoch, and solitary structure in the size of 20x23 mm adjacent to the choledoch at the pancreas head. Liver enzymes, bilirubin, CA 19-9 values were normal in biochemical evaluation. There was no pathology other than 3 previous coronary by-pass. The patient was operated with the pre-diagnosis of papilla tm. in ASA 2 risk group and then underwent Whipple surgery. Since there was E. Coli reproduction in the bile culture taken during the operation meropenem was initiated on the 3rd day and oral aqueous food and supplement was started on the fourth day. There was dark viscous fluid drainage (170 ml) from the subhepatic drain and a mild distension developed in the abdomen. When the same viscous fluid came from the skin on the fifth postoperative day, the wound was opened and vacuum-assisted dressing (VAC) was performed. Oral intake was discontinued on the 7th day, upon fever and progress in distention. Abdominal computed tomography revealed a collection extending to the pancreas in the posterior of stomach. Percutaneous drainage catheter was attached to the collection, peripheral parenteral nutrition (PPN) was started with octreotide due to pancreatic fistula, and vancomycin was added to the treatment. The patient's clinic improved from the 9th day. The skin wound was closed on the 10th day, the PPN was cut off by starting oral supplements with normal food. Antibiotics of the patient with an average daily fistula flow of 800 ml were discontinued on the 15th day, followed by outpatient follow-up. The flow of the fistula progressively decreased and was completely cut off on the 20th day. The collection lodge was checked with US and the drainage catheter was withdrawn. The pathology was reported as localized schwannoma of 2,2x2x1,7 cm in size around the terminal pancreatic ductus. Now the patient is followed without any problem.

### Pancreatic Schwannoma (PS)

Schwannoma or neurilemmoma; is usually a benign tumor originating from schwann cells in the cranial, spinal nerve roots and peripheral nerve cells. Schwannom extremities occur in the head, neck, retroperitoneum, mediastinum, pelvis and rectum. PS is quite rare and occurs in both sexes equally in adult age. Over the last 30 years, less than 50 PS cases have been reported in the literature. This tumor may occasionally show malignant degeneration. Two-thirds of PS can imitate cystic pancreatic tumors by showing degenerative changes such as cystic formation, calcification, and hemorrhage. Patients with PS usually have abdominal pain, nausea and vomiting, sometimes with weight loss and jaundice. Preoperative PS diagnosis is difficult and contrasted Ultrasonography and biopsy may be helpful in diagnosis. Surgery, which can range from simple enucleation to pancreatectomy, is the only curative treatment modality.

**Keywords:** Intermittent jaundice, schwannoma, Whipple

## PP-0667 [Hepatobiliary Surgery]

# The Place of Percutaneous Cholecystostomy in Patients with Acute Cholecystitis

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**Objective:** Percutaneous cholecystostomy catheter placement is a bridge, especially in patients with advanced disease or in critical period, prior to surgery. It is an alternative to emergent cholecystectomy. Postoperative complication rates have decreased significantly in recent years. The aim of this study is to evaluate the safety of percutaneous cholecystostomy in critical acute cholecystic patients.

**Material and Methods:** We retrospectively reviewed 138 patients with AC who we examined in our hospital's emergency surgery unit and were admitted to our general surgery department and did not undergo surgery but we performed PC and the data were analyzed. The results were examined in terms of complications in the first 72 hours, discharge time from hospital, catheter related complications (dislocation, being infected) and when the catheter was removed and whether patients were operated or not.

**Results:** A total of 78 female and 60 male patients who underwent PC had a mean age of 63.7 years. Clinical improvement and regression in laboratory tests were detected in all patients. Interval cholecystectomy was performed in 122 patients after an average of 6-8 months. Catheter was withdrawn in 16 patients, but they were not operated. A new acute attack developed in only 1 of these patients in 8 months of follow-up. New attack did not develop in these patients in this time period. The catheter in one patient came out of place at the end of the first month. However, the new was not inserted and was operated on the 8th week. 3 patients had wound infections. It regressed with antibiotic and regular dressing. There was an 8-week pregnancy in one patient. The operation was done in the 12th month. All operations were completed laparoscopically.

**Conclusion:** Good therapeutic outcomes and low recurrence rates of PC have been found in most of the AC patients that PC will serve as a bridge to the surgical intervention, which will cause the symptoms of the patients to regress and allow safe cholecystectomy.

**Keywords:** Acute cholecystitis, percutaneous cholecystostomy, interval cholecystectomy

## PP-0668 [Hepatobiliary Surgery]

# Factors Associated with Cystobiliar Fistula in Hydatid Cysts of the Liver

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**Objective:** Cyst hydatid disease is an important public health problem for our country. Anamnesis, physical examination, laboratory findings, serological tests and imaging methods are used in the diagnosis of the disease. In some cases bile ducts can open into the cyst. This leads to morbidity in cases. In this study, we aimed to investigate the factors associated with bile duct opening into the cyst in cases with liver cyst hydatid.

**Material and Methods:** The patients we operated due to cyst hydatid of the liver in our clinic between October 2009 and November 2017 were divided into two groups as those having bile in the cyst cavity during the operation (cystobiliar fistula) (Group I) and those not having bile in the cyst cavity during the operation (without cystobiliar fistula) (Group II). The groups were compared in terms of factors such as age, sex, cyst size and cholestasis enzyme values, etc.

**Results:** A total of 44 cases were included in the study, of which 68% (30) were female and 34% (14) were male. The mean cyst size was 79,45 (±34,57) mm. There were 7 (16%) cases in Group I and 37 (84%) cases in Group II. Sutures were placed in the biliary fistula area in four cases of group I. Drain was placed in the cyst in two cases. One patient underwent segmental hepatectomy. Bile was seen in the post operative drain in two cases in whom drain was placed in the cyst. Bile was cut without additional intervention in one case, whereas ERCP and sphincterotomy were needed case in the other. In terms of gender, 85% of Group I and 64.8% of Group II were female. In group I, the mean age was 36.1 (±9.02) while in group II, the mean age was 45.3 (±15.1). The mean cyst size in Group I was 94 mm (±30.1) and 76.7 mm (±35) in Group II. The cyst size was greater than 5 cm in all cases in group I. It was greater than 10cm in three cases. It was 50 mm and below in 13 (35%) cases in Group I and it was larger than 5 cm



in 65% of the cases. Single cysts were present in 85% (6 cases) of group I whereas single cysts were observed in 62% (23 cases) in group II. The cyst locations were mostly in the right lobe (70% and 71%, respectively) in Group I and Group II. Bilirubin values in Group I and Group II were 12.5% and 3% respectively. AST values were higher than normal in Group I and Group II as 12.5% and 3%, respectively. ALT values were higher than normal in Group I and Group II as 12.5% and 11%, respectively. ALP values were normal in 80% in Group I, whereas this rate was 88.5% in Group II. GGT values were 80% normal in both groups. LDH was 75% in Group I and 87% in Group II.

**Conclusion:** We have seen that opening the bile duct into the cyst is not a rare condition. Considering that cystic fistula may be opened especially in cases of single and large sized hydatid cysts, the cyst pouch must be explored in detail after removing the cyst.

**Keywords:** Hydatid cyst, cystobiliary fistula, gall bladder

## PP-0669 [Hepatobiliary Surgery]

### Sils Splenectomy

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In laparoscopic surgery, procedures with a tip are commonly performed. Laparoscopic splenectomy in some blood disorders and in the surgical treatment of rare pathologies of the spleen is one of the most commonly used laparoscopic solid organ surgeries today, but it requires advanced laparoscopic surgery experience and provides the advantages of superior cosmetic results specific to minimal invasive procedures, getting back to normal daily life early and lower wound site problems. Routine 3 port laparoscopic splenectomy is performed in our hospital. Laparoscopic surgery technique from single hole is widely used in gall bladder surgeries and is very new in kidney and spleen operations. SILS splenectomy provides a smaller surgical scars and higher patient satisfaction. As a result of this operation, all operations are made from the same hole without a need for other operation incision or to enlarge the entrance holes used in our patients with mass in the spleen. The splenectomy was completed by separating the hilus with a 60 mm stapler after appropriate dissection with laparoscopic principles by inserting 2, 5 mm and one 10 mm trockar with left subcostal 3 cm incision. A total of 9 patients had a mean age of 35.1, a mean operation duration of 57±32 min, and an average of 50 cc bleeding. No mortality and complications were observed. SILS can be used as a technique that collects the advantages of laparoscopic surgery and does not require additional pain and incision using the necessary incision after solid organ surgery.

**Keywords:** Laparoscopic splenectomy, SILS, single incision, three ports

## PP-0670 [Hepatobiliary Surgery]

### An Important Option in Difficult Cholecystectomies: Subtotal Cholecystectomy. Early Period Results

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**Objective:** The clinical picture and the operations performed due to gallstone disease have an important role in daily surgical practice. Gall bladder stones, which are determined incidentally, can become symptomatic at a rate of 20-25% in 10 year follow-up. Symptomatic gallstone disease can lead to some complications, especially acute cholecystitis in patients. The term 'difficult cholecystectomy' refers to the increased surgical risk compared to standard cholecystectomy, inability to reveal biliary anatomy clearly (acute/chronic cholecystitis) or insufficient provision of surgical exploration (obesity, chronic inflammation). The cholecystectomy operation, which can be performed as standard in almost every hospital in our country, is a serious source of morbidity and mortality due to lack of equipment, lack of surgical experience and/or inevitable intraoperative complications. We examined the outcomes and effectiveness of subtotal cholecystectomy surgery which we applied in cases where we can use the concept of difficult sac in our hospital and we find beneficial for prevention of intraoperative complications.

**Material and Methods:** The data of 95 patients who were operated electively with the diagnosis of symptomatic cholecystitis and operated emergently with the diagnosis of acute cholelithiasis in Kars Harakani State Hospital between May 2014 and February 2018 were screened retrospectively.

**Results:** The mean age of the patients was 54±5 and the female/male ratio was 3.5. Laparoscopic cholecystectomy was performed due to lack of response to elective surgery in 79 patients and to medical treatment applied after hospitalization with the prediagnosis of acute cholecystitis in 16 patients. Our surgical indications in the patients with acute cholecystitis were the absence of improvement in the clinical picture despite medical treatment, the presence of palpable painful distended bile duct

lesion in the right subcostal region, and elevation in BK and CRP levels. All patients were scheduled for surgery with a standard 4-port laparoscopic approach. Of the 95 patients, 82 of them had laparoscopic cholecystectomy, 13 patients had surgical dissection difficulty, and conversion cholecystectomy due to the failure to reveal the Callot triangle. Four of the 13 cases in whom it was switched to open surgery could be completed by cholecystectomy whereas subtotal cholecystectomy was performed in 9 cases because of the failure to obtain a "safety angle" in operative exploration and the inability to advance in Callot dissection. Subtotal cholecystectomy was performed in 3 male and 6 female patients. None of these 9 patients had a mechanical icterus picture and ERCP procedure. Seven of the nine patients had medical treatment resistant acute cholecystitis and two patients were in the elective surgery group. Reconstitutive type subtotal cholecystectomy was performed in 7 patients and fenestration type subtotal cholecystectomy was performed in 2 patients. No postoperative surgical complication, biliary leakage and mortality were observed in 8 patients who underwent subtotal cholecystectomy in the postoperative follow-ups, whereas one male patient was discharged with medical treatment applied after development of postoperative pulmonary thromboembolism.

**Conclusion:** Subtotal cholecystectomy can often be performed as definitive surgery if biliary anatomy can not be revealed. Subtotal cholecystectomy was performed as a primary therapeutic treatment in cases where difficult cases were forced to total cholecystectomy, considering the potential morbidity and mortality of a possible biliary injury for the patient.

**Keywords:** Subtotal cholecystectomy, Callot triangle, safe surgery, laparoscopic cholecystectomy, biliary tract injury

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## PP-0671 [Hepatobiliary Surgery]

# Correlation of Ratio of Neutrophil Lymphocyte Ratio in Mild Biliary Pancreatitis

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**Objective:** Increase in the number of neutrophils and decrease in lymphocyte counts are associated with sepsis and bacteremia. Neutrophil lymphocyte ratio is widely used to evaluate the development of surgical stress and development of inflammation. In this study, we aimed to evaluate the correlation between neutrophil lymphocyte ratio and Ranson values in patients with mild acute biliary pancreatitis.

**Material and Methods:** Patients with mild acute biliary pancreatitis being admitted to the general surgery department between January 2012 and December 2015 were evaluated retrospectively. Ranson values, neutrophil count, lymphocyte count and neutrophil/lymphocyte rates were calculated at the arrival and 48th hour of the patients. Chi-square test was used for statistical analysis and  $p < 0.05$  was evaluated significantly.

**Results:** 221 patients were included in the study. Forty-eight patients (22%) were male and 173 (78%) were female. Median age was 52 (range 18-94). Admission ranson was 0 in 84 patients, 1 in 70 and 2 in 67 patients. Ranson 48th hour value was 0 in 81 patients, 1 in 69 patients and 2 in 71 patients. The mean number of neutrophils at admission was 7.58, the mean number of lymphocytes was 2 and 48th hour mean number of neutrophils was 5.18 and the mean number of lymphocytes was 1.66. When the neutrophil lymphocyte ratio was evaluated, the admission mean neutrophil lymphocyte ratio was 6.33 and 9.56 at 48th hour ( $p=0.02$ ). Mean neutrophil and lymphocyte counts decreased while mean neutrophil lymphocyte ratios increased at 48th hour of the patients.

**Conclusion:** The neutrophil lymphocyte ratio can be used practically in the follow-up of acute mild biliary pancreatitis.

**Keywords:** Biliary, lymphocyte, neutrophil, pancreatitis, ranson

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## PP-0672 [Hepatobiliary Surgery]

# Should Patients Be Followed after Cholecystectomy in Terms of Liver Fattening?

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Liver fattening and cholelithiasis are associated with many metabolic factors, and we confront with it in patients undergoing computed tomography (CT). Liver fattening is a global epidemic picture nowadays and can lead to liver failure. Currently, it is in the second place among the causes of liver transplantation. Liver fattening is evaluated by various imaging methods. Although the gold standard is biopsy in diagnosis there is no chance of performing biopsy for each case. Therefore, imaging methods are at the forefront. Fattening is characterized by a reduceion in liver density in unenhanced CT. In this study, we aimed to compare the groups of patients having cholecystectomy and cholelithiasis by unenhanced CT imaging method with the control group with the laboratory data. The study was retrospective and included 143 patients from the hospital data system who underwent unenhanced CT. Four anatomic regions (segments 3, 4, 6, and 8) were identified to assess liver fattening in CT. Spleen was accepted as reference. Mean liver, spleen and pancreas densities, liver/spleen density ratio, liver-spleen density difference, liver and spleen dimensions, anterior subcutaneous fat tissue thickness and abdominal circumference measurements were made. Values of AST, ALT, GGT, ALP, cholesterol, triglyceride, LDL, HDL, total cholesterol, total bilirubin, albumin, WBC and Platelet were evaluated in all groups. There was a significant difference between the cholecystectomy and cholelithiasis group and the control group in terms of mean densities of the liver ( $p<0.001$ ). There was also a difference between the liver mean densities between the cholecystectomy group and the cholelithiasis group ( $p=0.041$ ). The lowest density values were determined in the cholecystectomy group. There was a positive correlation between anterior subcutaneous fat tissue thickness, liver size and liver fattening (Spearman's correlation  $r_2=0.213$ ,  $p=0.011$ ,  $r_2=0.405$ ,  $p<0.001$ ,  $r_2=0.326$ ,  $p<0.001$ ). There was no correlation between liver fattening and pancreatic fattening ( $p=0.124$ ). Unenhanced CT, magnetic resonance (MR), and USG imaging methods can be used to assess liver fattening. Although the sensitivity and specificity of MR is higher, liver fattening can be assessed both visually and quantitatively in unenhanced CT. Clinical trials involving cross-sectional studies conducted with CT or MR are few. There are more biochemical and sonographic studies. Liver fattening is one of the epidemic and popular issues of today. Our study is more valuable than operator-dependent sonographic-based studies in terms of determining numerical values of density. In conclusion, follow up of cholelithiasis and cholecystectomy cases in terms of liver fattening should be examined with further studies.

**Keywords:** Liver fattening, cholecystectomy, follow-up

## PP-0673 [Hepatobiliary Surgery]

# It is Time to Discuss Alternative Treatments to Percutaneous Cholecystostomy Catheter in Acute Cholecystitis Treatment for ASA IVE Patients

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**Objective:** According to the Tokyo 2018 guidelines, percutaneous cholecystostomy catheter (PC) recommendation level is reported as 1 level B in high-risk patients with acute cholecystitis. The definition of high risk is acute cholecystitis severity grade III, CCI (Charlson comorbidity index) 4 or greater, or American Society of Anesthesiologists (ASA-PS) 3 or higher. Some of these groups are candidates to cholecystectomy after acute attack regressed and comorbidities improved. However, if co-morbidities due to additional diseases remain unchanged, remain ASA IV, and if passage to distal is not observed in the cholangiography and pus drainage goes on, the patients being admitted with ASA IVE, undergoing PC for the purpose of acute attack treatment will be adhered to PC and their quality of life will drop. Different treatment modalities should be considered in these patients. We aimed to report the results of ASA IV patients who underwent PC and whose catheters could not be withdrawn.

**Material and Methods:** The patients who underwent PC in İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital between 2010 and 2018 were examined. Those who are still followed or who were exitus were included in the study. Those who could not be followed by our clinic after the procedure were taken out of the study. Patients' age, gender, comorbid diseases, ASA scores, and Tokyo risk categories were assessed. The data of patients who were evaluated by cholangiography and who had ASA IV and whose PC could not be withdrawn were examined.

**Results:** A total of 266 ASA IV patients underwent PC in İstanbul Bakırköy Dr. Sadi Konuk Training and Research Hospital between 2010 and 2018. PC of 107 patients could not be withdrawn because there was no regression of the ASA score and because the pus drainage continued. Mean Age was 70.6 years (56-84) and Male/Female ratio was 1.18. Mean follow-up time was 3.8 years. 15 patients died due to comorbidities.

**Conclusion:** Patients who have undergone PC due to ASA IVE are likely to be forced to live with PC because of the low evidence value of alternative therapies for PC and because complications of these patients have the possibility of progressing mortal.

**Keywords:** Acute cholecystitis, percutaneous cholecystostomy, Tokyo 2018

## PP-0674 [Hepatobiliary Surgery]

# Our Experience of Laparoscopic Approach to Cholecystoduodenal Fistulas

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**Introduction:** Bilioenteric fistulas are rare abnormal connection of the bile ducts and the gastrointestinal system. It is often encountered in cases where the diameter of the stone is greater than 20mm. This type of fistulas can occur between bile duct and duodenum or colon. In cases where gall bladder is fistulized to duodenum, acute or chronic cholecystitis may be together with gallstone ileus. The conditions in which gall bladder is fistulized to the colon, occur as chronic cholecystitis.

**Case 1:** A 79-year-old female patient was examined upon the complaints of chill and shaking and at the external center 7 days ago and was directed to our center due to high liver enzymes. MR examination revealed intra- and extrahepatic bile duct dilatation and aerobilia, findings of biliary sludge in choledoch upon detecting air in bile ducts in abdominal USG. Gall bladder stones and fistula tract between the gall bladder fundus and the proximal of the duodenum were detected. Sphincterotomy with ERCP and biliary sludge extraction from the choledoch were performed. Laparoscopically, wedge resection with EndoGIA was performed anterior to duodenum for fistula tract resection. Cholecystectomy was completed openly due to advanced adhesion. The patient was discharged on the 4th day after the operation with healing.

**Case 2:** A 76-year-old female patient was admitted to our unit with the complaint of abdominal pain. The patient stated she had gall bladder stone for 30 years. Stone was detected in the gall bladder and choledoch in abdominal USG and MRCP of the patient in whom mechanical icterus was observed in her laboratory values. Cholecystoduodenal fistula was not observed in preoperative imaging. Sphincterotomy and stone extraction from the choledoch were performed with ERCP. Laparoscopic cholecystectomy was performed, and wedge resection was performed with EndoGIA from the anterior part of the duodenum in the peroperatively detected cholecystoduodenal fistula. An adenomatous polyp was detected at the gall bladder of the patient. The patient was discharged with healing on the 7th day after the operation.

**Conclusion:** Bilioenteric fistulas are rare complications of bile ducts. The incidence may range from 0.15% to 8% in the patients having gall bladder stone. It is usually seen in the patients over 60 years old. Cholecystoduodenal fistulas may develop with advanced adhesions in cases of porcelain gall bladder. Symptoms such as abdominal pain, nausea, vomiting, jaundice, distention and gall bladder stone ileus may occur in these patients. Mortality in these cases can range from 15-22%. The main causes of mortality in patients is high due to pancreatitis, cholangitis, biliary fistula that may develop during examination and treatment and comorbidity due to advanced age. Cholesistoduodenal fistulas are seen in elderly patients. Since the rate of comorbidity and complication is high, the mortality rate is high. Especially in cases of old fistula, one should be careful in terms of gall bladder cancer.

**Keywords:** Cholecystoduodenal fistula, laparoscopy, ERCP

## PP-0675 [Hepatobiliary Surgery]

# ALPPS Procedure in Patients with Cholectal Cancer Liver Metastasis: Ankara University Experience

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**Objective:** Survival of patients with colorectal cancer liver metastasis (CCLM) can be increased by surgical intervention. However, the insufficiency of the postoperative remnant liver (PRL) volume after extended liver operations and in association with this, the high risk of liver failure are the most important factors limiting the operability of patients with CCLM. In recent years, a

two-stage liver resection procedure known as ALPPS (Associated Liver Partitioning and Portal Vein Ligation for Staged Hepatectomy) has been defined, which allows a rapid increase in PRL volume. In this study we aimed to present our ALPPS experience in patients with CCLM.

**Material and Methods:** Eighteen patients who underwent the ALPPS procedure between December 2012 and December 2017 were examined. PRL volume calculations of all patients were performed preoperatively by triphasic liver computerized tomography (CT) analysis using Livervision software on the seventh postoperative day. Patients who did not have adequate PRL regeneration were evaluated again by CT after two weeks.

**Results:** Eight patients had right trisegmentectomy, four patients had extended right hepatectomy, three patients had left trisegmentectomy, one patient had right hepatectomy and one patient had left hepatectomy (+) right posterior segmentectomy. First stage was performed in one patient, but the second stage was not performed due to the risk of intraoperative advanced adhesions and hemorrhage due to the risk of mortality, despite adequate PRL volume increase. The mean age of the patients was 55.53. Mean PRL volume hypertrophy was 71.53%. The median value of the time passed for hypertrophy was 10 days. The mean duration of stay in the hospital after the first stage was 10.47 days and 17.07 days after the second stage. After the first stage, two patients had biliary leakage, one patient had pulmonary embolism. After the second stage, liver failure was observed in 3 patients, intraabdominal abscess in one patient, incision site infection in two patients, pneumonia in one patient, biliary leakage in two patients and bile fistula in one patient. Pathologic evaluation revealed one patient as R1 and the other as R0. Two patients had perioperative (0-90 days) mortality. Mortality due to the disease was observed in three of the patients at 17, 20 and 30 months, respectively. The Kaplan Meier analysis of all patients revealed that the expected mean 1, 3, 5 years of survival was 81%, 57% and 57%, respectively.

**Conclusion:** The ALLPS procedure may be a potential curative surgical option in experienced centers in patients with CCLM who cannot undergo conventional surgical procedures.

**Keywords:** ALPPS, colorectal cancer, metastasis, liver

## PP-0676 [Administrative Issues]

# Problems and Solutions between the Patients with Multitrauma being admitted to the Emergency Service and Related Units

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**Objective:** To prove that preventing the debate between the patients with multitrauma being admitted to the emergency surgery service and the related units, performing early resuscitation and initiating the treatment of the patient hospitalizing him on behalf of the relevant unit reduce mortality and morbidity.

**Material and Methods:** Fifty patients, who did not require intubation, admitted to our surgical unit due to multitrauma between 2016 and 2017 were included in the study. Patient groups relating to neurosurgery, thoracic surgery, general surgery and orthopedics were selected. Radiologically, computed tomography and direct radiograph were used. All of these patients were followed in the surgical intensive care unit. Half of the patient groups were admitted in the name of the previously identified physician and the other half in the name of the identified unit.

**Results:** When all patients with multitrauma were examined and resuscitated in emergency surgery, and when they were followed up directly on behalf of the surgical intensive care officer, it was seen that the patients were assessed rapidly and the intensive care transfers were fast. It was found that the recovery time of the patients was shorter. Patients were transferred early from the intensive care unit to the related service. There was no discussion among the units. In the other group, there were problems and delay in the examination and treatment during the intensive care transfer phase and the patient's admission. Discussions took place about which service the patient would go after hospitalizing for a long time in the emergency service.

**Conclusion:** Patients who are admitted to the emergency surgery unit due to multitrauma should be met by the emergency specialist and should be examined and intervened promptly. The mortality and morbidity of the patients decreases if the patients are hospitalized to the branch of surgery previously determined by the administration,

**Keywords:** Early transport, multitrauma, harmonious study

## PP-0677 [Colon and Rectum Surgery]

# Dynamics of the Microflora of the Oral Cavity after Subtotal Colectomy

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**Objective:** In patients performed subtotal colectomy (SC) for slowly developing constipation (colonic inertia (CI)) in the de-compensated period, serious changes occur in the microflora of the digestive system. To define the changes in the content and amount of the microflora of the oral cavity (OC) after SC performed due to CI.

**Material and Methods:** Microflora was evaluated in 30 patients undergoing SC (Group 1) and in 10 healthy individuals (Group 2). Colonization capacity of microbes (CC) and antilysozyme activity (ALA) were calculated.

**Results:** While staphylococci was 3,6-105 KYV/sm<sup>2</sup> in Group 1 and 2,56±0,49x10<sup>2</sup> KYV/sm<sup>2</sup> in Group 2, the rate of St. Aureus was 47% in Group 1 and 8% in Group 2. The value of lactobacillus was 73,2% (8,8±1,2x10<sup>4</sup> KYV/sm<sup>2</sup>) in Group 1 and 5,87±1,09x10<sup>5</sup> KYV/sm<sup>2</sup> in Group 2. Staphylococcus epidermidis was 5,2x10<sup>5</sup>±0,68x10<sup>3</sup> KYV/sm<sup>2</sup> in Group 1 and 2,0±0,27x10<sup>2</sup> KYV/sm<sup>2</sup> in Group 2. The level of streptococcus salivarius was 57,3% in Group 1 and 24,8% in Group 2. Strep. Mutant was 30,9% in Group 1 and 15,6% in Group 2. Moreover, the rate of Strep. hemolytic were 44,3% and 8,2%, respectively. The level of Streptococcus mitis was 2,51±0,38x10<sup>5</sup> KYV/sm<sup>2</sup> in the first group and 1,05±0,38x10<sup>4</sup> KYV/sm<sup>2</sup> in the second group. The levels of candida fungus in OC were 57,6% and 21,3% in the first and second groups, respectively. While 90,7% lactobacteria, 23,9% bacteroid and 25,9% S.aureus were detected in the OC of normal healthy individuals, enterobacteria were not found. Except Staph.aureus and Staph. epidermidis, the ALA indicator of other pathogen microflora was low in both groups. The ALA indicators of Staph.aureus and epidermidis were 2,5 and 2 times higher in Group 1 than in group 2. In patients performed SC, the characteristic of OC microbial flora is the detection of enterobacteria, more than 2 times higher increase of Staph. Aureus colony, 76,2% decrease in the dominance of lactobacilli, and dominance of candida fungus (57,6%).

**Conclusion:** In patients undergoing SC, there is a correlation between the decreased biological defense factors of OC and high invasiveness of the microflora. In patients undergoing SC for CI, structural change occurs in the microflora of OC in long term with the increased rates of staphylococci and streptococci (70,5% and 27,9%, respectively), and with the decreased dominance of lactobacilli by 76,2%. A significant portion of the microflora consists of gram positive flora (78%), yeast fungi (44,8%), and enterobacteria (37,1%).

**Keywords:** Subtotal colectomy, microflora, oral cavity

## PP-0678 [Colon and Rectum Surgery]

# Clinical Appearance and Diagnosis of Ileosigmoid Knotting

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**Objective:** To evaluate the clinical appearance and diagnosis of ileosigmoid knotting.

**Material and Methods:** The records of 79 patients were treated for 51 years between June 1966 and July 2017. Of these patients 56 of them were retrospectively evaluated until June 1986 and 23 of the patients were evaluated prospectively

**Results:** Mean age was 47.4 years (range: 7-92 years) and 57 patients (72.2%) were male. 14 patients (17.7%) had sigmoid volvulus history, 14 patients (17.7%) had comorbid diseases and 3 patients (13.6%, 3/22) had pregnancies. Mean symptom duration was 44.2 hours (range: 6-120 hours) and 43 patients (54.4%) were shocked. The most common symptoms were abdominal pain (100.0%), inability to defecate (98.7%), distention (96.2%) and vomiting (78.5%); (96.0%), hypo-hyperkinetic bowel voice (89.9%), empty rectum (50.6%), musculoskeletal defense-rebound positivity (48.1%) and gangrenous rectal content (15.2%) were the most common findings. Four of the 57 patients (7.0%) with direct X-ray had radiographic findings of enlarged sigmoid colon and multiple intestinal air-fluid levels. When clinical data were evaluated together with direct radiographs, the correct diagnosis rate was 12.7%. Ileosigmoid knotting was diagnosed wrongly as obstructive emergency in 69.6% of patients and nonobstructive emergency in 17.7% of patients. The correct diagnosis rates of CT and MR were 100.0% (8/8 and 3/3, respectively) with radiology findings consisting of multiple bowel air-fluid levels with rotation in the ileum and sigmoid colon mesos.

**Conclusion:** Ileosigmoid knotting is commonly seen in adult males. Abdominal pain-tenderness, inability to defecate and distention are common in many patients. If CT or MR is not used, accurate diagnosis before surgery is not easy.

**Keywords:** Ileum, sigmoid colon, knotting

## PP-0679 [Colon ve Rectum Surgery]

## A Rare Cause of Ileus: Picture of Ileus Occurring as a Result of Gullian Barre Development with Chilaiditi Syndrome

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**Introduction:** Chilaiditi syndrome is a condition in which the colon or small intestine is displaced between the right diaphragm and the liver. Although it usually does not give evidence, it may cause respiratory or gastrointestinal complaints in some patients. Gullian Barre syndrome is an acute onset, immunologically mediated disorder of the peripheral nervous system. We aimed to present a patient who was admitted to our hospital with complaints of abdominal pain and gas stenosis. The patient was diagnosed with chilaiditi syndrome in the examinations performed and then the patient had ileus due to the development of gullian barre syndrome.

**Case:** A 72-year-old male patient was admitted to our hospital with abdominal pain and inability to defecate. The abdomen was observed in a distended view in the examination of the patient in emergency service. The digital examination of the rectum of the patient without acute abdomen was evaluated as empty. It was observed that the patient had air fluid levels in small intestine segments in direct abdominal radiography in standing position. In addition to the small intestine levels, the right hemidiaphragm was found to have a highly elevated position in the tomography scan for etiology and it was observed that the right lower lobe of the lung was not ventilated in the viewed sections. The patient was diagnosed with chilaiditi syndrome and was hospitalized in the general surgery department with the stating that the colon segment was located under the diaphragm on the liver. In the hospital stay, neurology consultation was requested upon the development of weaknesses in his extremities and Gullian Barre was diagnosed as a result of examinations. It was thought that the patient who had no surgical intervention, had no etiological cause for ileus in the examinations and no pathology other than chilaiditi syndrome, developed a diaphragmatic paralysis due to the acute gullian barre syndrome and consequently the colon segment squeezed between the diaphragm and the ileum and formed ileus picture. The patient was transferred to the neurology service and the treatment was planned and ileus picture also improved.

**Conclusion:** Intestinal obstructions and ileus patients are encountered frequently in emergency cases of general surgery. Brid ileus in the patients who have undergone previous operation or a newly developed bowel obstruction due to a tumor are the first to come to mind in the etiology of ileus patients. It should be kept in mind that when ileus etiology is investigated, patients with chilaiditi syndrome may develop ileus clinic effectively in neurological diseases.

**Keywords:** Ileus, chilaiditi syndrome, gullian barre

## PP-0680 [Colon and Rectum Surgery]

## A rare Acute Abdomen Cause: Ogilvie Syndrome

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**Introduction:** Ogilvie syndrome, also known as acute colonic pseudo-obstruction; is a syndrome that produces extreme dilatation and obstruction findings of the colon without organic obstruction. Although the etiology is not completely known, it has been associated with past surgical operations, trauma and cardiac diseases in which sympathetic innervation imbalance plays a role in pathogenesis.

**Case:** A 58-year-old male patient was admitted to the emergency department with the complaint of inability to defecate for ten days. It was observed that the patient had meningitis and orthopedic multiple operation history and he was admitted to the emergency service for several times. There was widespread tenderness and abdominal distension in the physical examination and the rectum was detected as empty in digital rectal examination.

In laboratory tests; WBC was 11,700 and the patient had no pathology except (85% neutrophil dominance). A diffuse air fluid level was detected in the direct abdominal radiography in standing position. It was observed in the abdomen CT that colonic loops were dilated and cecum diameter was 15 cm. The patient was considered to have an Ogilvie Syndrome at first, and was urgently operated taking into account the possibility of microperforation. Subtotal colectomy and endoostomy were performed. Postoperative service follow-up was made. Oral intake of the patient, whose ostomy was working, was initiated and as he tolerated oral intake it was increased. The patient was discharged with healing after withdrawing the drain on the postoperative 7th day. Ogilvie Syndrome is a multifactorial disease, with past surgical interventions, trauma (especially retroperitoneal), infection, and heart diseases being thought to play a role in etiology. Studies have shown that about 95% of cases are related to medical or surgical conditions and the rest are idiopathic. Today, the specific treatment of the disease is conservative approach and colonoscopic decompression if practice

is available. Surgical intervention should be performed in patients who have peritoneal irritation findings and who do not benefit from colonic decompression. Diagnosis in patients with Ogilvie syndrome is based on the assumption that non-specific signs and symptoms for mechanical obstruction may be due to Ogilvie syndrome. These patients have diffuse abdominal distension and usually have a comorbid pathology. There is not any specific laboratory finding for establishing diagnosis. Standing direct abdominal radiograph and the whole abdominal CT among anamnesis and imaging methods are helpful in diagnosis. Oral intake is discontinued in patients with no peritonitis requiring immediate operation or no evidence of abdominal free air and nasogastric decompression, intravenous fluid therapy, rectal tube and enema are applied conservatively. The most important complication that can develop during conservative follow-up is cecum perforation. The incidence of cecum perforation was reported to be 3-40% and related mortality was 40-50%. Surgical intervention should be performed without delay in patients with untreated or acute signs of medical treatment. Subtotal colectomy and end ileostomy should be preferred as surgical intervention.

**Conclusion:** Diagnosis in Ogilvie syndrome is based on the assumption that non-specific signs and symptoms for mechanical obstruction may be due to Ogilvie syndrome. Conservative follow-up is recommended in patients without peritoneal irritation finding. The most important complication that can develop during conservative follow-up is the cecum perforation and the patients should be followed closely.

**Keywords:** Ogilvie syndrome, acute colonic pseudoobstruction, subtotal colectomy, cecum perforation

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## PP-0681 [Colon and Rectum Surgery]

# Comparison of CR-POSSUM, Original ACPGBI and New ACPGBI Scoring Systems in Colon Rectum Surgery

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**Objective:** The purpose of this study was to compare the effectiveness of the new Association of Coloproctology of Great Britain and Ireland (ACPGBI) scoring system and the original ACPGBI and to evaluate the efficacy of Colorectal Physiological and Operative Score for enumeration of Mortality and Morbidity (Cr-POSSUM) on postoperative mortality after colorectal cancer surgery.

**Material and Methods:** The Cr-POSSUM, original ACPGBI, and new ACPGBI scores of 105 patients who underwent colorectal cancer surgery were retrospectively calculated. The data were obtained from the patients' medical records and surgical notes. Mortality was defined as death within 30 days of surgery. Scores were verified as calibration and discrimination. Calibration was assessed using the Hosmer-Lemeshow goodness of fit test and corresponding calibration curves. The discriminative ability of the models was assessed using (ROC) curve analysis.

**Results:** The observed mortality rate was 4.8%. The estimation of mortality of Cr-POSSUM, original ACPGBI and new ACPGBI was 9.92%, 7.35% and 4.20%, respectively. The areas under the curve (AUC) for Cr-POSSUM, original ACPGBI, and new ACPGBI scores are 0,792, 0,844 and 0,801, respectively.

**Conclusion:** The Cr-POSSUM, the original ACPGBI and the new ACPGBI scoring systems are effective methods for determining mortality rates and estimating the risk of death in individual patients. The new and original ACPGBI scoring systems performed slightly better than the Cr-POSSUM scoring system.

This study was published in Chirurgia (Bucur). 2014 Nov-Dec; 109 (6): 800-5.

**Keywords:** Colorectal cancer, CR possum, new ACPGBI

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## PP-0682 [Colon and Rectum Surgery]

# Postoperative Complications of Closure of Colostomy and Evaluation of Factors Affecting Complication Development

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**Objective:** In this study, we aimed to present the postoperative complications in the patients undergoing colostomy closure operation and what precautions can be taken to minimize these complications.

**Material and Methods:** 168 patients who underwent colostomy closure operation at Dr. Lütfi Kırdar Training and Research Hospital General Surgery Department between January 2007 and January 2015 were retrospectively examined. End ileostomy-colonic mucous fistula stoma closures opening in the form of double-barrel, divine colostomy closures and tube cecostomy closures are excluded from the study. Patients were evaluated comparing their gender, age, comorbid disease, first operation reason, the operation's being urgent or elective, stoma type, duration (months) between first operation and closure time, incision type, duration of operation, anastomosis closure method and shape, duration of hospitalization, and postoperative complications.

**Results:** Of the total 168 patients, 118 (70.1%) were male and 50 (29.8%) were female. The age distribution of the cases was between 20-88 and the mean age was 52.8 (SD: 15.6). Stoma was opened due to malignancy in 63 (37.5%) patients, trauma in 25 patients (14.9%), diverticulum perforation in 40 patients (23.8%) volvulus in 18 patients (10.7%) and other benign causes in 22 patients (13,1%). 142 (84.5%) operations were performed urgently and 26 (15.5%) operations were performed under elective conditions. End colostomy was mostly performed as emergency surgery and sigmoidostomy was applied mostly as elective surgery. Significant differences were found between duration of operation and length of stay when compared with local and laparotomy incision patterns of patients with sigmoidostomy and transversostomy who had only stoma closure operation ( $p<0,05$ ). In postoperative follow-up 36 (21.4%) patients were found to have complication, 27 (16%) patients had wound site infection, 14 (8.3%) patients had evisceration, 6 (3.6%) patients had pulmonary complication that will require treatment arrangement or change, 4 (2.4%) patients had passage problem (5 days without gaita discharge without anastomotic leakage), and 9 patients (5.3%) had anastomotic leakage. One patient who developed anastomotic leakage was treated conservatively and 8 patients were reoperated. Five patients (2.98%) with multiple severe comorbidities were excitus postoperatively. Anastomotic leakage, wound site infection and evisceration were significantly higher in patients with DM ( $p<0.05$ ). Patients with a longer waiting period of 3 months were significantly less likely to have anastomotic leakage ( $p<0,05$ ) than those with 3 months or less.

**Conclusion:** It is important to note that colostomy closure is an operation with a high morbidity rate and that mortality is at considerable level, and it is important to control comorbidity to reduce complication rates.

**Keywords:** Colostomy, anastomotic leakage, postoperative complication

## PP-0683 [Colon and Rectum Surgery]

# Transanal Excision of Mucinous Adenocarcinoma on the Ground of Rectal Giant Tubulovillous Adenoma

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**Introduction:** Polyps are masses originating from the stomach, small intestine, and the large intestine and grow towards the inner surface of the organ, reaching from the millimeters to centimeters. The risk of determination of life-long intestinal polyp is reported to be 6%. Only 5% of high risk polyps in colonoscopy examination are found to have intestinal cancer.

**Case:** An 83-year-old patient was referred to the emergency department with an ileus picture and an obstructive giant mass was palpated on the rectal examination of the patient with heart failure and atrial fibrillation (30% ejection fraction) extending to the proximal starting at 4.cm of rectum. We decided to apply spinal anesthesia to the patient for whom an emergency operation decision due to obstruction was made and had risk of general anesthesia after anesthesiological examination. It was determined that the giant polypoid mass was mobile in the rectal examination performed in the patient who was given lithotomy position after spinal anesthesia, and the local excision was decided. Local exclusion was made by preserving the 10 cm diameter surgical margin from the rectum 3.cm to proximal. The rectum was completely excised and the excision area was closed with double sutures. The patient had defecation on the postoperative 1st day. The patient was discharged on the postoperative fifth day. The pathologic result of the specimen was reported as 10x7x6 cm broad base vegetative appearance 1 piece of tissue tubulovillous adenomatous mucinous adenocarcinoma, intact surgical margin T1 tumor. No pathology was detected in the oncologic control PET film. Surgical resection is the primary and known treatment of intestinal cancer. Colorectal adenomas are premalignant lesions that can become malignant. The risk of malignancy increases as the size and number of adenomas increase. As an exception, villous adenomas can reach dramatic dimensions without malignancy. The treatment of adenomas with malignant components is the surgery. The type of surgery is shaped according to preoperative evaluations. We performed local excision with spinal anesthesia because of the risk of general anesthesia due to comorbid diseases of our patients.

**Conclusion:** The gold standard method of diagnosis and early treatment of polyps is endoscopy. Although our patient was diagnosed late and was admitted with obstruction picture, invasive cancer was not detected after surgery. Shortly after the mass was excised, the clinical picture quickly recovered.

**Keywords:** Giant rectal polyp, transanal excision, adenocarcinoma, rectum

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## PP-0684 [Colon and Rectum Surgery]

# Pararectal Mass: A Rare Case of Aggressive Angiomyxoma

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**Introduction:** It was to present a case rarely seen in pararectal region and that should be remembered as diagnosis in young women.

**Case:** A 10x8 cm mass in the posterior of the cervix, involving a dense heterogeneous fluid, pushing forward gestational sac (beta hCG: 1911 mU/mL) and vagina in uterus was detected in pelvic ultrasound of a 21-year-old woman who underwent gynecologic examination and was admitted for determination of gestational sac. So, the patient underwent pelvic Magnetic Resonance Imaging (MRI). It was observed that the lesion was hypo- and hypersignal in T1 and intermediate in T2 and had a size of 10x8x13cm and bilobular. At this stage, the findings were consistent with the tailgut cyst. The patient's obstetrician consulted the colorectal surgery clinic. The operation was delayed due to pregnancy. However, after 2 weeks, the patient was operated on the termination of pregnancy. Masses of 20x10x6 cm were completely removed with paracoccygeal approach. Peking procedure was performed because of uncontrolled bleeding. The wound was sutured when there was no hemorrhage at the reoperation 24 hours later. Tumor cells were reported in the pathologic diagnosis as aggressive angiomyxoma including both estrogen and progesterone receptors, desmin positive and peripheral skeletal muscle. The patient was discharged on the postoperative 7th day.

**Conclusion:** Treatment in aggressive angiomyxoma is surgical resection to achieve a negative surgical margin. The recurrence rate in these patients ranges from 25 to 47%, with 85% of recurrences occurring within 5 years (1). Gonadotropin releasing hormone agonist (GnRH-α) and aromatase inhibitors are used in treatment. It has been reported that recurrence with radiotherapy is not observed for 2-3 years (2). We think that long-term follow-up of these patients is appropriate.

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**Keywords:** Aggressive angiomyxoma, recurrence, anococcygeal approach

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## PP-0685 [Colon and Rectum Surgery]

# Colonic-Psoas Fistula and Abscess Associated with Stapler Anastomosis after Right Hemicolectomy: Case Report

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**Introduction:** The psoas muscle starts from the transverse process and intervertebral discs of the 12th thoracic and all lumbar vertebrae, descends downward from both sides of the spinal column and merges with the iliac muscle fibers and ends with attaching trochanter minor in the femur. It makes the femur flexion movement. The sigmoid colon is in close proximity with the appendix, jejunum, ureter, abdominal aorta, kidneys, and vertebrae, and infection of these organs may spread to the psoas muscle. The fistula is an abnormal association between two epithelialized surfaces. Fistulas are classified according to their anatomical and physiological positions and their factors. Anatomic Internal/external is defined according to the amount of physiological flow (ml/day) as low <200 per day, medium 200-500, and high >500 and etiologic underlying cause. We aimed to present a patient having psoas abscess who underwent right hemicolectomy 2 years ago with cecum tm prediagnosis and underwent laparotomy abscess- tumor recurrence? In the right psoas muscle in the follow-ups and stapler anastomosis was fistulized to psoas muscle and developed psoas abscess related with this.

**Case:** Patient who had right hemicolectomy operation in our clinic 2 years ago was admitted to our hospital with complaints of abdominal pain. Wbc 12200/ $\mu$ L and Hgb 12.7 gr/dl were observed in the laboratory tests of the patient. Abscess in the right quadrant in psoas muscle in the medial of anastomosis line and a lesion with undifferentiated recurrence were observed in the abdominal CT of the patient who had no clear pathology on pa graphy and direct abdominal radiography in standing position. When the patient's previous result of pathology was examined, the right hemicolectomy material was consistent with mucinous adenocarcinoma and PetCT of the patient was performed. A laparotomy was planned upon the lesion having SUVmax 15.26 and consistent with tumor tissue. In the exploration it was observed that ileotransversostomy loop with the help of stapler associated with previous right hemicolectomy was penetrated to the psoas muscle and that there was an associated psoas abscess fistulized to the psoas muscle from this region. The anastomosis line was released from the psoas muscle with blunt and sharp dissection, and anastomosis revision was performed. The operation was terminated when the frozen sent from the psoas muscle was consistent with inflammation.

**Conclusion:** Psoas abscess is a rare, usually late diagnosed disease with high mortality and morbidity. Psoas abscess is classified as primary and secondary. The etiology of primary psoas abscess is unclear. It is usually the result of a hematogenous or lymphatic spread of bacteria in an unknown focus. Secondary psoas abscesses constitute 70% of the cases and they occur as a result of local spread from the surrounding infected tissues. It spreads from the neighboring structures such as intestines, kidneys and vertebrae directly by spreading the infection factor. When the literature is reviewed, a fistula that develops due to migration of the stapler anastomosis line to the psoas muscle and an abscess formed after that have not been found. The most frequently identified complaints during the development of psoas abscess are fever and side pain. The cause of death is mostly due to the septic complications in the cases in whom diagnosis and treatment are delayed. Treatment is percutaneous or laparotomic surgical drainage, as in all abscesses.

**Keywords:** Fistula, Stapler, PetCT

## PP-0686 [Colon and Rectum Surgery]

# Rectovaginal Septum Perforation after Anal Coitus: Case Report

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**Introduction:** Rectovaginal fistula is defined as the connection with an epithelial way as a result of the detachment of the septum integrity between the posterior wall of the vagina and the anterior wall of the rectum. While the vast majority of rectovaginal fistulas are acquired, very few are congenital. Fistula mostly developing related with birth traumas frequently develop secondary to inflammatory bowel diseases. Septum defects after sexual instrumentation of foreign body or coitus, particularly anal coitus, are quite rarely seen. In this article, we aimed to present the patient with septum perforation being admitted to the emergency service with complaints of vaginal and rectal bleeding after anal coitus.

**Case:** A 27-year-old female patient presented with complaints of vaginal and rectal bleeding after coitus. In her anamnesis the patient had complaint of bleeding as leakage from the anus and vagina after severe and instantaneous pain in the anal region after anal coitus 2 hours ago. In the examination of the patient performed with speculum, a 3 cm septum full-thickness oblique starting 2 cm proximal to the entrance of the vaginal posterior wall, and a 3 cm rectum mucous laceration continuing to the proximal side were observed. The patient had stable vital signs and Hgb was 13.2 g/dL. Because of severe pain, rectal examination could not be performed and the patient was taken into operation. Detailed pelvic examination under general anesthesia was found to involve full-thickness injury in the anterior wall of the rectum, starting from 2 cm proximal to the dentate line going 3 cm further proximal, with linear extension and vaginal posterior wall injury. The vagina of the patient with no sphincter injury was opened with the help of speculum. The posterior wall defect was closed with 3/0 vicryl. The rectum mucosa was closed with full thickness 3/0 vicryl. The left lateral peritoneum was opened with mini laparotomy and sigmoid colon was anastomosed from the left abdominal quadrant to the skin as loop sigmoidostomy. The patient who did not have any additional pathology in the postoperative follow-ups was discharged with planned ostomy according to rectal and vaginal examination after 2 months.

**Conclusion:** Rectovaginal septum laceration is often due to causes such as labor and surgical trauma. In recent years, although an increase in septum perforations following foreign body sexual instrumentation and coitus is observed, it is quite rarely seen. Rosenhein et al. proposed a classification and treatment protocol for rectovaginal lesions that they described in 1980 and they continue to be used in today's conditions. They are classified as Type I: Loss of perineal structure without fistula, Type II: Lower 1/3 vaginal fistula, loss of perineal structure, Type III: Lower 1/3 vaginal fistula, Intact perineal muscles, Type IV: Middle 1/3 vaginal fistula and Type V: upper part of 1/3 vaginal fistula. Treatment consists of waiting for 4-6 months with the aim of regression of the edema and infection according to the level of laceration, and if necessary, diversion and posterior fistulotomy by opening ostomy, anoplasty or interposition surgeries in which tissue is placed between both walls and slip flap operations are applied.

**Keywords:** Rectovaginal Fistula, rosenhein classification, septum perforation

## PP-0687 [Colon and Rectum Surgery]

# Appendectomy Material Seen as Burkitt's Lymphoma Incidentally

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**Introduction:** Appendix neoplasms are rare, occur in about 1% of appendectomy specimens and constitute less than 1% of general bowel tumors. The most common histology is mucinous adenocarcinoma followed by intestinal type adenocarcinoma. Carcinoid tumors constitute only 11% of them. Primary appendiceal lymphoma is seen in 0.015% of all appendectomy materials. In a study of 8699 appendectomy cases, 101 resulted in neoplasia in which there were three lymphomas, and the majority of appendiceal lymphomas were non-coexisting B cell lymphomas. Here we present a case of Burkitt lymphoma detected incidentally in a material that has undergone appendectomy and sent to pathology.

**Case:** A 27-year-old male patient presented with abdominal pain, nausea and vomiting in emergency service. The patient had occasional pain in the lower right quadrant of the abdomen for six months, but he stated that it was more severe and he had fever for the last 3 days. There was sensitivity in the lower right quadrant of the abdomen and the rebound was positive. There was no leukocytosis in the examination of the patient, and the electrolytes were normal. Abdominal tomography revealed mass appearance in the pericececal area. For this reason, the patient underwent colonoscopy and the entire colon was examined, from rectum to cecum. The colonoscopy result was evaluated as normal. Then, the decision was made to make the diagnostic laparoscopy to the patient. In laparoscopic abdominal exploration, appendix was observed to be edematous, hyperemic and there was abscess in the pericececal area, and appendectomy was performed. The appendix material was sent to pathology and resulted in Burkitt's lymphoma. The patient was referred to the hematology and oncology departments; and the patient began to receive postoperative chemotherapy with their recommendations. The gastrointestinal system is the region where most frequent extranodal involvement of non-Hodgkin's lymphoma appears. Gastrointestinal system diseases are seen in 4-20% of non-Hodgkin's lymphomas and 30-45% of extranodal cases. They are observed most commonly in stomach followed by small intestine, pharynx, colon and esophagus. Although appendix involvement is rarely seen in the literature, extensive studies have referred to gastrointestinal lymphomas and the incidence of gastrointestinal involvement has been reported at 1-3%. It has been reported that the majority of these cases are non-hodgkin. Appendix enlargement in CT, mesenteric contamination, 6-7 mm size of appendiceal diameter is defined as finding of appendicitis. The missing information, however, is that in addition to the standard nontumoral appendicitis, what the upper limit of the appendix size should be in infiltrative neoplasms. The diameter of appendix with inflammation without neoplasia in CT is usually not more than 15 mm, beyond which enlargement is sufficient to suspect neoplasm. The majority of cases seen in the literature are measured at 2.5 cm or more in appendiceal diameter. It is difficult to establish guidelines in the treatment of appendiceal lymphoma. Primary appendiceal lymphoma can be successfully treated with appendectomy, with or without right hemicolectomy. Adjuvant chemotherapy depends on the stage of the disease and histopathology. Chemotherapy was recommended in the postoperative period.

**Conclusion:** In the histopathological evaluation of appendiceal materials, the lymphoma should be kept in mind in the differential diagnosis and should be evaluated with appropriate samples.

**Keywords:** Appendicitis, appendix lymphoma, burkitt lymphoma

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## PP-0688 [Colon and Rectum Surgery]

# Trocar Entry Site Metastasis in Colon Cancer

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**Introduction:** In colorectal cancer cases, the incidence of metastasis in trocar sites in laparoscopic surgery has been proven to be low by studies. In this case, we wanted to describe the postoperative trocar entry site metastasis (TESM) of a case with the diagnosis of adenocarcinoma, which did not exceed the colon serosa and the surgical margin was intact.

**Case:** A 29-year-old female patient was admitted to the infectious disease outpatient clinic with complaints of abdominal pain, diarrhea and weight loss. The patient stated that she had two months of abdominal pain localized in the lower left quadrant and she had sometimes black stool. She had ability to defecate and there was sensitivity in the lower left quadrant. Blood tests were normal. Colonoscopy revealed rectosigmoid junctional ulcer, vegetating lesion, and biopsy resulted in adenocarcinoma. It has been reported that there was a mass in the rectosigmoid area in CT, but no metastasis. Laparoscopic low anterior resection was planned. A massive lesion was observed in the sigmoidal distal, proximal to the rectum, but not

exceeding the serosa, and the liver and other intestinal segments were natural. The mass was excised; descending colon-rectum anastomosis was performed. The pathology result was grade two, invasive to the muscular layer, without lymphatic invasion, intact distal surgical margin, and adenocarcinoma without metastatic lymph node. The patient was referred to oncology department, and according to the pathology report, it was said that there was no need for CT. The patient was admitted again with abdominal pain and nausea after five months. The patient was hospitalized with the pre-diagnosis of ileus and colonoscopy was performed. Stenosis was seen in the rectum and bougie dilation was performed. Biopsy was taken, the result of the pathology was reported as granulation tissue. The patient applied again with abdominal pain two months later. Metastases were seen in trocar sites in the examination. Diagnostic laparoscopy was performed; metastases were seen in the omentum and in the trocar entrance sites. Therefore it was switched to laparotomy. Omentum and masses metastasized to the anterior wall of the abdomen were excised. Widespread tumor implants were seen in pelvic and rectum. But it was not suitable for resection. He was discharged on the sixth postoperative day.

TESM developed after laparoscopic colorectal surgery was first reported in 1993. In the literature, it has been observed that there is no difference between the trocar site and incisional line in open or laparoscopic surgery in colectral cancer cases in terms of recurrence and incidence is 1%. In recent years, although decreasing TESH is rare. In one study causes of TESH have been suggested as direct implantation, transmission from instruments, aerosolization of tumor cells, surgical technique, tumor manipulation and hematogenous spread. Measures to be taken to prevent TESH are to place trochanter vertically in the peritoneum to minimize the tissue trauma, to perform trocar detection and to prevent carbon dioxide leakage, to minimize the touch of the tumor tissue and not to cut the tumor tissue, to cut the tumor from the distal, to remove the tumor tissue from the abdomen in the bag, to use adequate training and technical equipment, and the right patient choice.

**Conclusion:** It should be taken into consideration that newly detected masses in areas such as anterior abdominal wall trocar entry site in patients operated due to colorectal cancer may be metastatic lesions.

**Keywords:** Colon cancer, metastasis, trocar entry site

## PP-0689 [Colon ve Rectum Surgery]

# Manometrical Pre- and Post-Operative Examination Results of Anal Sphincter Tonus of Sphincteroplasty Patients

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**Objective:** Fecal incontinence is defined as recurrent and uncontrolled fecal material passage in individuals over 4 years of age for at least 1 month. Anal sphincter damage may develop after an obstetric or surgical trauma. Surgical treatment of fecal incontinence should be performed in patients who do not respond to medical treatment or who have proven anatomic defect. Different sphincter repair options are available in the literature. Preoperative diagnosis of anal sphincter repair and anal manometry and ultrasonography in its postoperative follow-up are frequently used as anorectal physiologic tests.

**Material and Methods:** Our study included patients who underwent overlapping sphincteroplasty by the proctology unit between January 2015 and August 2017. Manometric examination was performed preoperatively and 6 months postoperatively. Sphincter squeezing pressure data of patients were reviewed retrospectively from file and electronic records.

**Results:** In our study 3 of the patients were male and 5 of them were female. The mean age was 38.75. According to etiologic reasons, 5 patients had obstetric trauma related sphincter damage and 3 patients had sphincter damage after surgical trauma. All patients underwent preoperative and postoperative manometry. 33% of the patients had decreased sphincter pressures and 67% of them had increased sphincter pressures compared to the preoperative period.

**Conclusion:** Anatomic sphincter injuries caused by trauma due to obstetric, operative or external factors of the perianal region are the most common correctable causes of anal incontinence surgically. Neurological pattern accompanies the picture in incontinence usually having multifactorial etiology. The chances of success after sphincteroplasty becomes lower, especially in obstructive traumas because pudendal nerve accompanies them at a certain rate. Anal manometry is an anorectal physiology test that can be used in objective evaluation of detection of sphincter pressures after sphincteroplasty.

**Keywords:** Fecal incontinence, sphincteroplasty, anal manometry

## PP-0690 [Colon and Rectum Surgery]

# The Results of the Comparison of the Rates of Sphincter Defects in Endoanal USG of Patients with or without Obstetric Trauma among Patients being Admitted with Fecal Incontinence

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**Objective:** Fecal incontinence is defined as the inability of controlling anal excretion of bowel content at the appropriate time and place. There are many specific tests to determine the underlying mechanism of fecal incontinence. The possible etiologic factor, the severity of the symptoms, the effect on the quality of life and the age of the patient are effective in the selection of the diagnostic test. Fecal incontinence is mostly seen as a result of obstetric injury. Although fecal incontinence in one-tenth of postpartum women and sphincter damage in only 10% of vaginal births are apparent, occult damage occurs in other women as well. Postnatal ultrasonography studies have shown sphincter damage in 30% of women after first vaginal delivery. Anal Endosonography is useful in evaluating the structural integrity and thickness of external and internal anal sphincter muscles, and showing cicatrization, sphincter dilation, muscle tissue loss and other local pathologies.

**Material and Methods:** Seventy four female patients who were admitted to the proctology unit due to fecal incontinence between January 2015 and August 2017 were included in our study. Clinical histories of the patients were questioned. The patients were divided into two groups, as those with and without obstetric trauma. The endoanal USG results of the patients were examined retrospectively from file and electronic records.

**Results:** There was no obstetric trauma in 54 patients in our study. 29 (53.7%) patients had sphincter defects in endoanal USG performed. Of the patients 20 of them had the history of obstetric trauma. Sphincter defect was detected in 16 (80%) of these patients.

**Conclusion:** Anal endosonography is a simple and inexpensive method of showing anal sphincters and is currently preferred for examining anal sphincter morphology. The results of these tests are guiding for further investigation and treatment. 80% of the patients with birth trauma had sphincter defect in USG and 53% of the patients without birth trauma had sphincter defect. Birth trauma significantly increased the incidence of sphincter defects in patients. If we look at the rate of detection of sphincter defects in patients without obstetric trauma, sphincter damage may be found in patients who have normal vaginal delivery regardless of the trauma history of the patients, so anal endoscopy should be performed.

**Keywords:** Fecal Incontinence, obstetric sphincter injury, endoanal USG

## PP-0691 [Colon ve Rectum Surgery]

# The Role of Crp and Procalcitonin Values in Early Diagnosis of Anastomotic Leakages in Colorectal Surgery: An Experimental Study

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Post-operative anastomotic leakages after intestinal anastomoses can lead to very high mortality and morbidity rates. Difficulties in early diagnosis of anastomotic leakages increase these mortality and morbidity rates. As a result, considerable mortal complications such as peritonitis, sepsis and septic shock can develop in patients. In many retrospective studies on humans, it has been shown that levels of CRP and procalcitonin in the blood may be significant in the early diagnosis of anastomotic leaks. However, prospective studies in this area seem to be inadequate.

Homogeneous studies are required when working on people due to the conditions such as age, sex, comorbid diseases, surgical techniques used, and differences in postoperative treatments, and difficulties are encountered in obtaining accurate results. For this reason, in homogeneous groups, there is a need for experimental studies in which the same surgical technique is applied and the levels of CRP and procalcitonin, are to be effected with least variability. Our aim in this study is to investigate whether there is a statistically significant and usable difference in the blood values of the control and study groups of blood CRP and procalcitonin levels on postoperative 1st and 5th day by creating a controlled anastomosis in rats. Twenty male, Wistar Albino rats, were divided into two groups as 10 control groups and 10 study groups. All applications were carried out by the same research

team. End to end single layer colocolic anastomosis was applied using 8 sutures in control group and 4 sutures in study group after a few cm of full thickness incision from the distal of cecum. Literature data were used for the anastomotic leakage model. Blood samples were taken from the control and study groups on the first postoperative day and the values of CRP and Procalcitonin were analyzed. All rats were followed in separate cages and blood samples were taken again on postoperative 5th day and the values of CRP and Procalcitonin were analyzed. The colonic segment undergoing anastomosis was excised and sacrificed. As a result, significant anastomotic leakage was detected in rats undergoing anastomosis with 4 sutures and no significant anastomotic leakage was detected in rats undergoing anastomosis with 8 sutures. Blood CRP and Procalcitonin values were found to be significantly higher in the group which underwent anastomosis with 4 sutures and anastomotic leakage was seen. Control and study group CRP and procalcitonin values were statistically analyzed. There was a statistically significant difference between postoperative 1st and 5th day values. Explosion pressures were measured by excising the colonic segment undergoing anastomosis. The results of explosion pressures were evaluated in rats with intact anastomosis line. According to the results of the study, positive predictive value of CRP and Procalcitonin in the early diagnosis of anastomotic leakages was determined.

**Keywords:** Anastomotic leakage, CRP, Procalcitonin

## PP-0692 [Colon and Rectum Surgery]

# Presacral Epidermoid Cyst Resected by Paracoccygeal Approach

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**Introduction:** Presacral (retrorectal) masses are often asymptomatic and incidentally detected during imaging performed for other reasons. The target in their treatment is complete excision. Selection of the surgical approach in the complete excision of the presacral masses is important. Anterior (abdominal), posterior (sacral-coccygeal-perineal) or combined approaches may be preferred. Sacroctomy/coccyxectomy may or may not accompany mass excision. In this study, resection of a retrosectal cystic mass that was symptomatic with paracoccygeal approach was presented.

**Case:** A 29-year-old female patient presented with pain in her waist and both hips for 6 months and swelling in the intergluteal region. Physical examination and laboratory examinations were normal. A 6x4x4 cm sized hypointense in T1A and hyperintense in T2A, cystic mass with regular margins in which no contrast enhancement was observed in the extrasphincteric area of the posterior vicinity of the anal canal in magnetic resonance imaging.

No mass was detected in the rectosigmoidoscopy. Preoperative biopsy was not needed due to benign nature in imaging. Histopathology of the mass excised with paracoccygeal approach in jackknife position under general anaesthesia was obtained as epidermoid cyst. No problem was detected in the 6-month follow-up of the patient who was discharged on the first postoperative day.

**Conclusion:** The location and nature of the mass according to S3 vertebrae is important in the surgical approach to presacral masses. Excision with paracoccygeal approach is an effective method that can be applied easily in the benign non-invasive masses, with possible benign nature, that are located under the S3 vertebra level and have no invasion of surrounding tissues.

**Keywords:** Epidermoid cyst, paracoccygeal, parasacral, presacral mass, retrorectal mass

## PP-0694 [Colon and Rectum Surgery]

# Our Solid Phenol Application Results in Primary and Recurrent Pilonidal Sinus Disease

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**Objective:** Pilonidal sinus is a common disease in society and there are still controversies related to its treatment nowadays. Today although complete removal of the diseased tissue is the major principle of the treatment local application of phenol is still valid nowadays. In our study, we aimed to present our results of solid phenol administration in patients with primary and recurrent pilonidal sinus.

**Material and Methods:** Patients who was operated in the outpatient clinic of Ümraniye Education and Research Hospital due to pilonidal sinus disease or pilonidal sinus and developed recurrence were included retrospectively. Patients were evaluated

for age, gender, number of sinuses, pilosity state according to Ferriman-Gallwey Classification (FGC), type of previous surgery, number of times phenol applied and success state.

**Results:** The mean age of the 18 patients included in the study was 37 years, and seventeen (95%) of the cases were male and one (5%) of the patients was female. The mean number of sinus was two. The mean state of pilosity was two. One patient had limberg flap and one patient had recurrence after primary repair. Full recovery was achieved in fourteen patients, after phenol administration 3 times in single session for two minutes, and complete recovery was achieved after 3 sessions in two of the recurrence cases. No improvement was achieved in one patient after 2 sessions and was operated. All procedures were carried out in outpatient clinics, and no activity restriction was made for the patients.

**Conclusion:** Consistent with the literature, we believe that solid phenol administration in our limited number of cases is effective, safe, without activity restriction and low cost treatment in recurrent and primary cases in pilonidal sinus disease.

**Keywords:** Pilonidal sinus, solid phenol, recurrence

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## PP-0695 [Colon and Rectum Surgery]

# Comparison of Long Term Results of Cleft Lift Technique with Limberg Flap Method in the Treatment of Pilonidal Sinus Disease; Retrospective Study

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**Objective:** Today, Limberg flap application is one of the most widely used methods in the treatment of pilonidal disease. Many studies about its results have been published. The cleft lift procedure is a newer method defined by Bascom. Mostly short term results have been presented in the studies conducted about this method. There is also no large case series since the method is new. In our study, it is aimed to compare both methods and present the results.

**Material and Methods:** Records of all pilonidal sinus operations performed in our clinic between 2007 and 2012 were retrospectively reviewed and the 1st group was named as Limberg group (LG) and 2nd group was called Cleft Lift Group (CLG). Dermographic characteristics of the patients, duration of operation, postoperative complications (seroma, hematoma, infection, wound separation, flap necrosis), withdrawal day of the drain, duration of hospital stay were examined. Patients were called for control at 6 months postoperatively and evaluated by physical examination for recurrence and numbness. All patients were contacted by telephone and asked whether they were recurrence during the time. Patients whose data cannot be achieved and who did not receive the 6 month examination, could not be contacted by telephone and did not accept to work were excluded from the study.

**Results:** The mean age was  $24.08 \pm 4.880$  in LG and  $23.68 \pm 4.780$  in CLG ( $p=0.331$ ). The duration of operation was  $43.15 \pm 0.410$  minutes in LG and  $39.53 \pm 1.178$  minutes in CLG ( $p=0.003$ ). In CLG, operations took place in a shorter time. When it was evaluated in terms of withdrawal time of the drain, it was  $2.94 \pm 0.60$  days on average in LG and  $1.75 \pm 0.55$  days in CLG. ( $p=0.001$ ). Seroma was observed in 21 patients (7.2%) in LG and 17 patients (6.3%) in CLG ( $p=0.738$ ). Hematoma was observed in 12 patients (4.1%) in LG and 6 patients (2.2%) in CLG ( $p=0.237$ ). Wound site infection occurred in 13 patients (4.5%) in LG and 6 patients (2.2%) in CLG ( $p=0.166$ ). When patients with flap necrosis were evaluated, necrosis developed in 19 patients (6,5%) in LG and 7 (2,7%) in CLG patients ( $p=0.028$ ). Wound separation was observed in 16 patients (5.5%) in LG and 37 patients (13.7%) in CLG ( $p=0.001$ ). The mean length of hospital stay was  $2.94 \pm 0.60$  days in LG and  $1.75 \pm 0.55$  days in CLG ( $p=0.001$ ). Loss of local sensation at the operation site was found in 46 patients (15.8%) in LG and 14 (5.2%) patients in CLG ( $p=0.001$ ). 236 (80.8%) patients in LG and 262 (97.0%) patients in CLG stated that they were not disturbed by the operation scar when it was asked whether they were disturbing the patients cosmetically ( $p=0,001$ ). The recurrence rates were 12 (4.1%) in LG and 3 (1.1%) in CLG ( $p=0.035$ ).

**Conclusion:** As a result, the cleft lift procedure, even though wound separation is more common; may be a more advantageous method than limberg flap technique because of shorter operation time, less drainage requirement, shorter hospital stay, shorter flap necrosis, better cosmetic results and patient satisfaction and lower recurrence rates.

**Keywords:** Pilonidal sinus, cleft lift, limberg flap

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## PP-0696 [Colon and Rectum Surgery]

# Hartmann Procedure: Single Center Experience

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**Objective:** The Hartmann procedure was first defined in 1923 by French surgeon Henry Hartmann in rectosigmoid cancers as an alternative to abdominoperineal resection in high-risk patients. Severe inflammation or contamination of the abdominal cavity may prevent primary anastomosis. An end colostomy and a rectal stump are left in the Hartman procedure. The most frequent cases of Hartman's surgery are perforated diverticulitis with cancer and abdominal sepsis. Ideally, Hartmann closure may be considered as the inflammation or primary disease regresses over time. However, since this operation has high morbidity, correct selection of the cases and good preparation of the operation are necessary. We aimed to report the results of the Hartmann procedures carried out in our clinic between 2010 and 2016.

**Material and Methods:** We retrospectively examined 78 cases of which we applied the Hartmann procedure emergently or electively in our clinic between the years of 2010-2016 (6 years period) and 32 cases of which Hartmann Hartman closure was performed. The data were obtained by reviewing patient files, surgery and pathology reports, and by telephone interviews with patients.

**Results:** 45 of the cases were male, 33 patients were female and the mean age was 63. Eleven cases (78%) were operated emergently and elective operation was performed in 17 cases (22%). 32 cases were operated due to malignancy, 15 cases due to diverticulum perforation, 11 cases due to sigmoid volvulus, 5 cases due to iatrogenic causes, 3 cases due to ischemic colitis, 3 cases due to sigmoidovesical fistula, 2 cases due to secondary strictures to inflammatory bowel disease, 1 case due to trauma and 1 case due to rectovaginal fistula. Hartmann closure was performed with a second operation in 32 cases. The average time between the first operation and the second operation was 185 days. The mean duration of hospitalization was 16.7 days after the first operation and 11.7 days after the second operation. When postoperative complications were considered, intraabdominal infections were the most common (17 cases) after the first operation and wound site infections (5 cases) occurred after the second operation. The mortality rate of the first operation was 14% (11 cases) and no mortality was detected in the second operation. The reason why we had little repair of Stoma was that first of all, the majority of the patients had general condition disorder and/or comorbid diseases or cancer recurrences and secondly, some of the patients (14 cases) refused the second operation.

**Conclusion:** Although anastomotic primary resection has become increasingly popular in recent years, many surgeons still prefer multi-stage methods such as the Hartmann procedure in the presence of complications such as diffuse peritonitis or severe obstruction. Closure of the Hartmann procedure with high mortality and morbidity can often be done in benign colon diseases. The process of deciding the appropriate timing of closure should be made specific to the individual. The surgeon may have the opportunity to reduce surgery-related morbidity by optimizing the patient's condition.

**Keywords:** Hartmann procedure, colorectal cancer, complication

## PP-0697 [Colon and Rectum Surgery]

# Anastomotic Leakage and Management in Patients Undergoing Hartmann Colostomy Closure

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**Objective:** To evaluate anastomotic leakages occurring after colostomy closure of patients opened with Hartmann colostomy due to various colorectal diseases and their management.

**Material and Methods:** We retrospectively analyzed demographic data, causes of opening colostomy, complications, and data about diagnosis and treatment approaches of 66 patients especially with anastomotic leakage who underwent Hartman colostomy closure in Numune Training and Research Hospital General Surgery Clinic between January 1, 2012 and December 31, 2017 were obtained from electronic records.

**Results:** Of the 66 patients, 46 patients (69%) were male and 20 (31%) were female. Their mean age was 56 (18-85) years. Hartman colostomy was opened in 21 of the patients included in the study due to colorectal cancer, in 11 patients due to sigmoid volvulus, in 4 patients due to diverticulitis perforation, and in the remaining 30 patients due to other reasons. The average closure time of the ostomy is 3 months. In the postoperative period, infection of the surgical site was detected in 19 patients and anastomotic leakage was detected in 4 patients. The diagnosis of anastomotic leakage was made by clinical, laboratory and imaging (Abdominal Tomography) findings. Mortality developed in 1 of these. The Charlson Comorbidity Index (CCI) of the patient who developed mortality was 6 and the cause of mortality was pulmonary embolism. Hartmann colostomy was performed in 2 patients again. The remaining one patient was fully recovered with medical treatment. There was no statistically significant difference for CCI in Mann-Whitney Test between the patients with anastomotic leakage and those who did not have anastomotic leakage ( $p=0.271$ ).

**Conclusion:** Hartmann colostomy closure constitutes the group of patients with high CCI. Providing bowel continuity requires proper timing and proper patient selection. The complication rates are high due to the comorbidity of these patients after surgery. In the literature, the complication rate was 55%, the mortality rate was 4% and the anastomotic leakage rate was found to

be 5-7%. It is very important to predict and define complications. In our study, anastomosis leakage rate was controlled with low mortality rate.

**Keywords:** Hartmann colostomy, anastomotic leakage, anastomotic leakage management

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## PP-0698 [Colon and Rectum Surgery]

# Endoscopic Dilatation in Anastomotic Stricture developing after Low Anterior Resection

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**Objective:** Development of benign anastomotic stricture after colon-rectal surgery is a long-term complication. It is usually seen after anastomotic leakages. Factors such as radiotherapy, anastomotic stapler, ischemic anastomosis line also play a role in benign stricture etiology. Endoscopic balloon and bougie dilatations are primarily applied in the treatment. The aim of this study was to investigate the causes of benign anastomotic stricture after low anterior resection and to report the results of bougie dilatation applied in anastomotic strictures.

**Material and Methods:** Patients who underwent low anterior resection in the last year were retrospectively evaluated. The cases that developed anastomotic stricture and were subsequently applied dilatation were included in the study. Bougie dilatation was applied to cases with anastomotic stricture on control endoscopies. Starting with the smallest bougie that could pass through the anastomosis, the dilatation process was continued until the maximum diameter of bougie was applied.

**Results:** Seven cases developing anastomotic stricture after low anterior resection were included in the study. Five cases were male and two cases were female. The mean age was 55.2 (37-84). Four cases were operated due to rectum adenocarcinoma, one case due to rectal polyp, and two cases due to endometriosis invasive to rectum. Anastomotic stricture developed in 4.1 months (2-12 months) on average. The use of anastomosis in three cases, radiotherapy in two cases, and use of staples in two cases were suspected in the etiology. The procedure was successful after single session bougie dilatation in 4 cases. Bougie dilatation failed in two cases. The stome opened after anastomotic stricture could not be closed in one of these cases.

**Conclusion:** Benign anastomotic strictures can produce undesirable results after colon-rectal surgery. In some cases, diverting stomas may become permanent stoma. Treatment is especially difficult in anastomotic strictures due to anastomotic leakage and radiotherapy. Endoscopic dilatations are primarily applied in the treatment of anastomotic strictures. Surgical treatment may be an option in endoscopically unsuccessful cases. However, the success rate of relapsarotomy is also low in these cases. As a result, the management of benign anastomotic strictures after colon-rectal surgery can be difficult. Patients may be condemned to permanent stomach after a benign cause in anastomotic strictures that may develop after anastomotic leakage and/or radiotherapy. The negative aspect of this study is the low number of cases. However, the number of experienced centers in the management of these cases after anastomotic stricture is not much. We think that bougie dilatation is more effective than balloon dilatation in anastomotic strictures in line with the data of this study.

**Keywords:** Anastomotic stricture, surgery, endoscopic dilatation, colorectal

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## PP-0700 [Colon and Rectum Surgery]

# Our Laparoscopy Experience in Colorectal Cancer

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**Objective:** Laparoscopic resection in colorectal cancer surgery is considered an alternative to conventional surgery in the last two decades. Not having major wound incisions, reducing surgical stress, short-term mobilization and minimizing hospitalization time are among known advantages of it and it facilitates fast-track surgery.

In this study, we aimed to investigate the short term results of patients who underwent laparoscopic resection due to colorectal cancer at Private Çamlıca Erdem Hospital between 2014 and 2017.

**Material and Methods:** 84 patients with the diagnosis of preoperative colorectal cancer who was operated between 2014 and 2017 were examined retrospectively.

**Results:** Of the 84 patients, 66 patients were male and 33.3% were female. The ages ranged from 40 to 93 with a mean of 60.76±11,64 years. The first defecation took place in 35±0.65 days on average. The mean time of first oral intake was 2.13±0.37

days. Reoperation rate is 1.2%. The mean hospital stay was  $4.70 \pm 1.25$  days. Complications occurred in 4,8% of the cases, surgical site infections in 1.2%, leakage in 1.2%, eventration in 1.2%, and hemorrhage in 1,2%. The case with leakage underwent low anterior resection and the stoma was not opened. Complaints were treated conservatively except hemorrhage. Anastomoses were performed extracorporeally with Phenesteil or supraumbilical- incision. Protective ileostomy was performed at a rate of 8.4% and distant metastasis was observed in 2.4%. When localization is examined; it was observed in ascending colon in 32.2% of them, in descending colon in 22.6% of them, in sigmoid in 20.2% of them and in rectum in 25.0% of them. The histology was in the form of adenocarcinoma in all cases. The diameter of the tumor varies between 1.5 and 9 cm with a mean of  $3.39 \pm 1.30$  cm; the number of lymph nodes dissected ranged from 10 to 94, with a mean of  $22.71 \pm 12.14$ . There was no statistically significant difference between the number of lymph nodes dissected according to localization ( $p > 0.05$ ) and it was remarkable that the number of lymph nodes dissected in the descending colon group was lower than the other groups. The complication was seen in 3 male cases who were over 50 years old. The tumor localization of two cases was sigmoid and one was rectum. Mortality was not observed.

**Conclusion:** The first laparoscopic colonic resection was performed by Jacobs M, Verdaja J and Golstein HS in 1999. Senagore reported that he performed medial-lateral mobilization and vessel laparoscopy in 2004. The resection and anastomosis were extracorporeal. Port site metastasis in 1994 was 21% in 1994 and was acceptable at 2.4% in 2010. There was no significant difference between it and conventional surgery in terms of anastomotic leakage. Although it is thought that should not be applied in T4 tumors there are also studies in the literature with acceptable oncological results. The lymph nodes dissected in stage 3-4 were 10-67 (mean: 23) in this study and no local recurrence was observed. As the rate of protection of sphincter increases, it is observed that leakage also increases. Protective stoma is a frequently applied method and has not been found effective in many studies. Leakage was seen at a rate of 1.2% in this series, which was not high compared with conventional method. The conversion rate was found to be 4-30% in the literature. No conversion was observed in our series. Laparoscopic resection of colorectal cancer is now accepted as the gold standard. We also think that laparoscopy can be performed safely.

**Keywords:** Colorectal cancer, laparoscopic resection, fast-track surgery

## PP-0701 [Colon and Rectum Surgery]

# Laparoscopic Resection in Colonic Schwannoma: Case Report

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**Introduction:** Schwannomas are tumors originated in Schwann cells in the neural sheath and observed frequently in head, neck and extremities. It is very rare to see a primary schwannoma in the colon and rectum unrelated to Von Recklinghausen. They constitute 2-6% of all gastrointestinal tract submucosal tumors. It is difficult to have preoperative diagnosis and its treatment is radical excision. Schwannomas occur at a rate of 83% in the gastrointestinal tract and at a rate of 12% in the small intestine. Colorectal location is relatively rare. They are benign encysted tumors, growing slowly. Local and distant metastasis rates are 30% and 2%, respectively. The incidence is the same in both men and women, and the age of onset is 60-70.

**Case:** A 67-year-old male patient presented with complaints of fatigue in our clinic. There was no feature in his medical history. There was no abnormality except his hemoglobin (Hb) 5.8 g/dl and hematocrit (Hct) 28.8%. Colonoscopy was performed with the appearance of a  $3.5 \times 4$  cm polypoid mass at the level of cecum and the ascending colon in abdominal computed tomography (CT). The almost 3 cm polypoid ulcerated lesion at the level of the ascending colon in the colonoscope was interpreted as being GIST. The result of the biopsy was reported to be lymphoma or leiomyoma. Laparoscopic right hemicolectomy was applied to the patient. Complication was not observed in the patient with a hospitalization time of 5 days. Pathology result was a tumor of  $4 \times 3.8 \times 3$  cm in size with no invasion, Ki-67 4% and mitotic index was  $< 1$ . CD 117, CD 34, desmin negative, and S 100 positive and was reported as schwannoma. 33 lymph nodes were sampled and metastasis was not detected. The patient, who is on the 5th day of the follow-up, has a course without any problem.

**Conclusion:** Schwannoma was first reported by Verocay in 1910 [4]. It is mostly originated from Aurbach's plexus in the gastrointestinal tract and has a structure of sessile polyp growing towards lumen. It has an appearance of pediculated polyp when they originate from Meisner's plexus [2]. Its diagnosis is usually made with post-operative immunohistochemical examination. Although Schwannoma is a benign tumor, malignant transformation can occur if left untreated. It leads to symptoms such as abdominal pain, obstruction and rectal bleeding caused by other polypoid lesions [5]. It has been detected in our case diagnosed by anemia but it has not been encountered in the literature. Schwannomas accepted among subtypes of gastrointestinal stromal tumors (GIST) are separated by immunohistochemical examination. CD 117 (KIT), CD 34, CKs, SMA and are desmin negative. S 100 protein and vimentin generally show positive staining [5]. The Ki-67 proliferative index being  $\geq 5\%$  and the tumor diameter's being greater than 5 cm, enhance the probability of malignancy. In addition, the rate of mitotic activity being  $> 5$  is a parameter

increasing the risk of metastasis and recurrence. Ki-67 was present in 4% of the patients, the tumor was 4 cm in the widest site, and the mitotic index was <1. The general opinion in the treatment is complete local excision. Today, laparoscopic colectomies are widely used without increasing complication risk, less hospital stay, less postoperative pain and cosmetic superiority. We did not encounter any complications or recurrences in the patients. As a result schwannomas are post-operatively diagnosed tumors and their treatment is resection. The laparoscopic approach can be applied safely as it is in other gastrointestinal tumors.

**Keywords:** Schwannoma, Von Recklinghausen, right hemicolectomy

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## PP-0702 [Colon and Rectum Surgery]

# Cecal Neuroendocrine Tumor: Case Report

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**Introduction:** Neuroendocrine tumors are tumors originating from enterochromaffin Kulchitsky cells located at the base of Lieberkuhn crypts in the gastrointestinal tract. Neuroendocrine tumors in World Health Organization 2010 was classified as neuroendocrine tumor G1 (carcinoid), neuroendocrine tumor G2, small or large cell neuroendocrine carcinoma, mixed adeno-neuroendocrine carcinoma, hyperplastic and preneoplastic lesions.

We aimed to present a patient with a neuroendocrine tumor localized in the cecum.

**Case:** A 54-year-old male patient being admitted with complaints of abdominal pain and constipation was found to have undergone segmental small bowel resection and ileotransversostomia due to mesenteric malrotation in childhood from the anamnesis and epircrisis. Computed tomography revealed a mass of about 2 cm and perianal lymph nodes in the cecum. Approximately 2 cm of ulcerovegetan mass was detected in the base of the cecum in the colonoscopy. Pathologic examination result of colonoscopic biopsy revealed neuroendocrine tumor. There was no symptom of carcinoid syndrome in the clinic of the patient whose routine laboratory tests were normal. Right hemicolectomy and total mesocolic excision were performed to the patient without distant metastasis in the thoracoabdominal tomography for staging. The pathology result was reported as grade 2 neuroendocrine tumor, with a 4%, 67 ki index and involved lymph node ratio of 6/14 and surgical margin was negative. No additional systemic treatment was required in the patient's tumor council. The patient is still under follow-up in the second postoperative month.

**Conclusion:** Cecal neuroendocrine tumors are very rare and mostly asymptomatic. They are usually determined incidentally during operations such as tomography, magnetic resonance imaging, colonoscopy, or during surgery. Surgery is still the most important treatment option, although somatostatin analogues and chemotherapy have place in selected cases.

**Keywords:** Neuroendocrine tumor, carcinoid, ki 67 index

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## PP-0703 [Colon and Rectum Surgery]

# Predictive and Prognostic Biomarkers in Colorectal Cancer: Systematic Review of Recent Developments and Challenges

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**Objective:** Colorectal Cancer (CRC) mainly consists of genetic and epigenetic changes in colon epithelial cells and then turns into adenocarcinoma. Since CRC is largely asymptomatic until the alarm feature comes to the advanced stages, the application of the screening program is important to reduce cancer incidence and mortality rates. Carcinoembryonic antigen (CEA) and CA 19-9 are tumor markers commonly used in patients with colorectal cancer. The aim of this study is to assess the relationship between preoperative tumor markers and subsequent pathological diagnosis in CRC.

**Material and Methods:** A total of 42 patients who underwent curative surgery for primary colorectal tumors at Akdeniz University Hospital between 2016 and 2017 were included in the study. Institutional medical records were checked for each patient and demographic characteristics, clinical, operative, pathological and follow-up data were collected from a prospectively maintained database. Tumor markers were included in addition to pre-operative routine blood tests.

**Results:** Only elevated CA 19-9 levels were present in 11.9% of patients without elevated CEA levels, and there was an increase in CA 19-9 levels in 33,3% of them and in CEA levels in 38.0% of them. Postoperative pathology was interpreted as adenocarci-

noma in 88.0% of patients with positive markers before surgery ( $p=0.013$ ). In addition, 57% of patients with negative markers had adenocarcinoma as postoperative pathology.

**Conclusion:** Today, many potential biomarker specimens are successfully used in clinical practice (fecal hemoglobin, carcinoembryonic antigen (CEA and CA19.9 etc.), but these are not highly promising diagnostic targets for personalized medicine. Therefore, there is a significant need for genetic markers that will make individualized and optimized patient treatment reliable, minimally invasive, sensitive and specific to detect disease at the earliest possible stage.

**Keywords:** Colorectal cancer, tumor markers, prognostic biologic markers

## PP-0704 [Colon and Rectum Surgery]

# Retrorectal Mass Excision: Clinical Study on Seven Patients

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**Objective:** Tumors in the retrorectal space are rare and pathologically heterogeneous. Primary tumors in the presacral (retrorectal) space are quite rare in adults and the estimated incidence in large centers is 0.0025-0.014. The purpose of this study is to evaluate the outcomes of surgical treatment of retrorectal tumors in our institution.

**Material and Methods:** Medical records, radiology, pathology reports and surgical approaches were retrospectively reviewed from March 2015 until December 2016. Seven patients [6 males; mean age= $48.45 \pm 4.8$  years (range, 32-91) years] with primary or recurrent retrorectal tumors who were operated under general anesthesia were included in the study.

**Results:** Surgically, laparotomy approach was used in 2 cases, sacral approach in 1 case, anterior-posterior approach in 4 cases abdomino-sacral approach in 1 case. The mean hospital stay was  $14.55 \pm 2.75$  (7-25) days. Recurrence was observed in one patient (15%) at the end of the follow-up period. The pathology was interpreted as malignant after surgery in a total of 5 (71.4%) patient. The pathology of three patients was reported as mucinous cystadenocarcinoma, two patients as liposarcoma and others as epidermal cyst and angiofibrosarcoma. Contrary to what is known, only one patient was female and the percentage of malignant tumors was high in pathological reports.

**Conclusion:** Successful treatment of these tumors requires careful clinical evaluation and expertise in pelvic surgery. Surgical treatment is the main treatment, MR is the most useful imaging method.

**Keywords:** Retrorectal mass, retrorectal treatment, surgical treatment

## PP-0705 [Colon and Rectum Surgery]

# Short Term Results in Patients Undergoing Filac in Perianal Fistula Treatment

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**Objective:** FILaC is a sphincter-protective treatment option in the treatment of anal fistula symptoms. The primary closure of the fistula tract is achieved by using laser energy emitted by a radial fiber connected to the diode laser. The short term and mid term results are effective and safe. In this study, we aimed to share the short term results of FILaC applied patients.

**Material and Methods:** Twenty patients with anal fistula underwent FILaC. All patients underwent colonoscopy and pelvic MRI before the procedure to reveal the fistula tract. Patients and fistula characteristics, previous treatments, recovery rates, failures and postoperative incontinence were reviewed.

**Results:** Eight (40%) of the patients were female and 12 (60%) were male. The mean age of the patients was 44.2. Abscess discharge and seton application was performed due to fistula in 4 of the patients. 16 patients were initially treated with FILaC. The follow-up period after FILaC was 3 months (1-5) on average. Anal fistula symptoms were observed to recover in 18 (90%) cases in the short term follow-up period. 2 (10%) patients had perianal abscess development after FILaC treatment. None of the cases developed incontinence.

**Conclusion:** FLaC procedure is a safe, simple, not causing sphincter damage and minimally invasive method with high success rate in short term. Long term comprehensive studies are needed to reveal long term results.

**Keywords:** FLaC, perianal fistula, external anal sphincter

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## PP-0706 [Colon and Rectum Surgery]

# The Effectiveness of Magnetic Resonance Imaging in Determining The Type of Anal Fistulas

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**Objective:** The aim of our study was to determine the efficacy of magnetic resonance imaging (MRI) in determining the localization of the perianal fistula.

**Material and Methods:** Patients who were operated due to perianal fistula and underwent MRI in our hospital database were reviewed retrospectively. Examinations were evaluated to determine the type of fistula. Sensitivity, specificity and positive predictive values of MRI in detecting fistula type were defined.

**Results:** 74 patients (55 [74.3%] male, mean age 39.8±11.9) were included in the study. Fistulotomy (±fistulectomy) (n=61, 58.5%) and seton application (n=13, 17.6%) were performed due to intersphincteric (n=27, 36.5%), transsphincteric (n=43, 58.1%) and suprasphincteric, 82.4%) fistula. MRI examinations revealed that 20 (57.1%) of the cases with intersphincteric fistula were intersphincteric, 14 (40%) of the cases were transsphincteric and 1 (2.9%) case was suprasphincteric; 7(19,4%) of the cases with transsphincteric fistulas were intersphincteric, 29 (80,6%) cases were transsphincteric and 3 of the patients with suprasphincteric fistulas (100%) were interpreted as suprasphincteric. Sensitivity, specificity, and positive predictive value of MRI to show intersphincteric, transsphincteric, and suprasphincteric fistula types were 74.1%, 68.1%, and 57.1%, and, 67.4%, 77.4% and 80.6% to 75%, 100% and 100%, respectively.

**Conclusion:** MRI has a certain value in determining whether the fistula is intersphincteric or transsphincteric in patients to be operated due to perianal fistula. It is especially effective in the exclusion of patients with suprasphincteric fistula. For this reason, it is advisable to routinely use MR in patients with perianal fistula.

**Keywords:** Anal fistula, magnetic resonance imaging, perianal disease, fistulotomy

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## PP-0707 [Colon and Rectum Surgery]

# Strangulated Rectal Prolapse due to Unspecified Sigmoid Colon Tumor; Emergency Surgical Approach

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**Introduction:** Rectal prolapse (RP) is the protrusion of the full thickness rectum from the anus. Strangulation can rarely be seen. The annual incidence of RP is 2.5 per 100 000 population. It is more common in women and elderly people. Female/male ratio is around 6-10/1. Colon tumor (CT) is rare in RP etiology. Strangulation may occur with incarceration in patients with high sphincter tonus and emergency surgery is required.

**Case:** The 72-year-old female patient was admitted with RP having a non-reducible, undiagnosed mass on the tip of it 3 days ago. The 25 cm column was prolapsed. Biopsy was performed at the external center thinking that the mass might be CT and the patient was discharged 3 days ago. It was observed at the admission that the prolapsed part was edematous and bleeding was observed. There was no necrosis and it was attempted to be reduced manually. She was taken to the operating room for reducing under anesthesia due to pain. The patient not being reduced in any condition and was suspected to have CT underwent open anterior resection. A 4-cm diameter difference was observed between the invaginated distal part and the normal proximal colon in the laparotomy. The incarcerated part could be withdrawn to the abdomen by perforating the colon. Hartman was applied due to diameter difference and clinical condition. The pathology was specified as adenocarcinoma. There was no involvement in the removed lymph node (LN). There was no problem in the 30-month follow-up. RP significantly reduces the quality of life. Rectum may be prolapsed with defecation or independently. The rectum mucosa is mostly edematous and fragile. Ulcerated regions can be seen, and it tends to bleed. It can usually be reduced with hand. Strangulated RP occurs with severe pain and

bleeding. Necrosis and perforation may develop if strangulation is not intervened early. In our case, the strangulated part was edematous, with bleeding and severe pain. Necrosis and perforation were not seen, even though they could not be reduced by hand or under anesthesia. After laparotomy, it could be reduced into the abdomen by providing immediate perforation from the proximal of the tumoral region. A rare cause in RP etiology is intussusception associated with CT. Sun et al have suggested that the most common cause of RP is 61% long rectosigmoid colon in the young population. In the case, colo-colic intussusception dragged the tumoral structure as precursor point to the tip of the prolapsed column segment and edema and pain have made it impossible to reduce the prolapse. Reduction is recommended under sedation and analgesia in situations where there is no strangulation, and in cases where there is no reduction. Even in anesthesia the case could not be reduced. If there is no possibility of an additional evaluation for the mass at the tip of the prolapsus and there is not a pathologic diagnosis, we think that the diagnosis should be evaluated as CT and the procedure should be applied according to the tumor. We planned open sigmoidectomy for adequate mesenteric and LN excision due to tumoral mass in our cases. Reporting the mass as adenocarcinoma supports the procedure we used. Although colostomy seems to be an aggressive approach, colo-rectal anastomosis is seen as risky.

**Conclusion:** RP is rare in anorectal emergencies. It should not be forgotten that one of the reasons for RP may be CT. The biopsy should be taken and colonoscopy should be performed if it can be done in patients with RP after colorectal masses. The surgery to be selected changes according to the time of arrival of the patient and the facilities of the hospital. In cases of emergency where there is no pathological diagnosis, if the mass is present, it can be evaluated as CT and appropriate emergency surgery can be performed.

**Keywords:** Rectal prolapse, colon tumor, strangulation

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## PP-0708 [Colon and Rectum Surgery]

# Hyperplastic Polyp Case in Appendix

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**Introduction:** Serrated adenomas of appendix are considered more aggressive than serrated adenomas of colon and rectum. Serrated polyps are divided into three subgroups histologically: hyperplastic polyps, sessile serrated adenoma, traditional serrated adenoma. Hyperplastic polyps of appendix are rarely seen and resemble hyperplastic polyps at the morphological colon. In the pathological evaluation of this case, acute appendicitis was reported to be compatible with hyperplastic polyps. Appendix hyperplastic polyps may be with acute appendicitis, as well as occasionally incidental. The presence of adenocarcinomas in the large intestine and the presence of mucosal hyperplasia in the appendectomy necessitate advanced tests for exclusion of colorectal neoplasias.

**Case:** A 62-year-old male patient was admitted to the emergency service with a complaint of abdominal pain starting three days ago. There were rebound and defense in the right lower quadrant of the abdomen and acute abdomen symptom was detected. Preoperative abdominal ultrasound examination showed the appendix with a diameter of 8 mm, thick wall and echogenic, and it could be compressed very little. Thinning of the wall at the tip and wall discontinuity were observed. Findings were reported to be consistent with perforated acute appendicitis and the patient was operated. Appendectomy was performed. The patient was discharged on the postoperative 2nd day. An appendectomy material of 4 cm in length and a diameter of 0.6-0.9 cm having with some periappendicular, necrotic appearance fat tissue on it was observed in the macroscopic examination of the surgical specimen, and the material was obliterated with lumen having fecaloid content and histopathologic examination was reported as an appearance consistent with acute appendicitis and hyperplastic polyp. No polyp was detected in the colon in colonoscopic examination performed in order to exclude the possibility of synchronous adenocarcinoma in the colon in the first postoperative month. While hyperplastic polyps of appendix are frequently encountered incidentally, it can sometimes be confronted with an acute appendicitis clinic as in our case. Coexistence of hyperplastic polyps of appendix with adenocarcinomas in large intestine is important and appendectomy specimens should be absolutely investigated histopathologically. Appendicular malignancies are very rare. 0.5% and 1.4% of the appendectomy specimens are diagnosed with primary appendix cancer. Tumors are rarely suspected preoperatively. Carcinoid is the most common one in appendix cancers, and it constitutes 50% of primary lesions of the appendix. Although very rare, granular cell tumor, paraganglioma, neuroma and neurofibroma can be seen in appendix. Malignant lymphoma may be localized in appendix, and metastases in the gastrointestinal tract, breast and female genital organs have been reported as well. In a recent review, the incidence of incidental malignant tumors in the histopathological examination of appendectomy materials was reported as 0.3%. For this reason, histopathologic examination must be performed for the material obtained in the appendectomy.

**Conclusion:** It is important to remind the patients to come with pathology reports in the postoperative period and that they should obtain information from their doctors about the report. Although the cases with a probable appendix diagnosis requires a specific approach and treatment, the diagnosis of hyperplastic polyp localized in appendix results in an advanced examination indication to exclude synchronous polyps and adenocarcinomas in the large intestine.

**Keywords:** Appendicitis, serrated polyps, appendix hyperplastic polyp

## PP-0709 [Colon and Rectum Surgery]

# Melanosis Coli: Case Presentation

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**Introduction:** Melanosis coli is the dark brown pigmentation of the colon due to mucosal accumulation of brown lipofuscin pigment, which is produced as a result of the destruction of apoptotic epithelial cells, which occurs in patients using laxative for a long time, especially due to chronic constipation in older ages. In this study, we presented a 78 year old female patient with melanosis coli developing due to laxative use and it was aimed to discuss the disease in the light of the related literature.

**Case:** A 78-year-old female patient was admitted to our emergency department with the complaints of colic-like abdominal pain, distention, inability to defecate and lack of appetite. It was learned from her medical history that she had D. Mellitus for the last ten years, COPD (chronic obstructive pulmonary disease) and essential hypertension. In the family history; there was no important feature. She had abdominal distention and a metallic voice in all quadrants of the abdomen in the physical examination. There was no important feature in routine hematologic and biochemical examinations except elevation in blood glucose levels and increase in CRP and procalcitonin levels. Radiologically, abundant gas shadows were detected in I standing abdominal radiograph and was found in abdominal tomography to be consistent with small bowel obstruction secondary to adhesions. Emergency surgery was performed due to mechanical bowel obstruction. It was observed in the exploration that the right colon was quite mobile and dilated compared to normal. In addition, column segments from transverse colon middle parts to the rectum were dilated, elongated, and intense fibrotic changes were observed in the mesos of a segment about 1 meter long from left colon to the sigmoid colon. Partial colon resection and end-to-end anastomosis were performed in the patient. The patient who passed the postoperative period without any problems was discharged with healing on the 7th day. Diverticulosis + melanosis coli were detected in the microscopic examination of the colectomy material. The patient was found to have no complaints at the 6th month of re-evaluation. There was also no abnormality in the control colonoscopy.

**Conclusion:** Melanosis Coli is a rare entity especially in patients who use laxatives for a long time. Regression is possible by ceasing laxative use.

**Keywords:** Melanosis coli, anthraquinone laxatives, colon cancer

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## PP-0710 [Colon and Rectum Surgery]

# Our Cleft Lift Operation Results in Sacrococcygeal Pilonidal Sinus Disease

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**Objective:** Bascom et al. defined the operation of cleft lift in the treatment of sacrococcygeal pilonidal sinus disease in 2002, considering that the disease was caused by damaged dermis and epidermis in the intergluteal sulcus. In this method, the deep tissues are left in place and only the diseased areas are excised and the intergluteal sulcus is displaced by the asymmetric flaps formed from the dermis and epidermis. This study was planned with the aim of determining the complications developing in patients who underwent cleft lift operation.

**Material and Methods:** Patients who underwent cleft lift operation with pilonidal sinus disease diagnosis in the Department of General Surgery at Süleyman Demirel University School of Medicine between 2008 and 2013 were reviewed. Patients' age, gender, duration of operation, body mass index, the use of drainage in operation and withdrawal time of the drainage were recorded. Hemorrhage, flap necrosis, seroma, hematoma, wound separation, wound infection and duration of hospitalization were determined. Patients were recalled at intervals 3 months in the first year and then 6 months, and the recurrence developing rates were determined. Patients who did not come to the control or whose information was lost during the follow-up period were excluded from the study. In operation, dermis and epidermis were removed to involve pilonidal sinuses. The midline was shifted with the help of the created flaps. The hemovac drain was placed under the skin and the skin was closed primarily.

**Results:** 296 patients who underwent cleft lift operation were included. The duration of follow-up is median 43 (min 12, max 60). In 18 (6.1%) of the patients the wound was separated, 16 (5.4%) patients had seroma, 15 (5.1%) patients had wound infections and 5 (1.7%) patients had recurrence.

**Conclusion:** The advantages of cleft lift operation in the treatment of sacrococcygeal pilonidal sinus disease are short operation time, early withdrawal of the drain, short hospital stay, low recurrence rate and low flap necrosis rate. These rates were found to



be in accordance with the literature. However, wound separation and seroma rates were higher when compared with literature. One reason for this may be the inadequate number of patients in similar studies in the literature. From this point of view, we can say that our study has sufficient number of patients and we obtained more objective results. Another reason may be early withdrawal of the drain. We think that prospective studies should be done for this.

**Keywords:** Cleft lift, pilonidal sinus, wound separation

## PP-0711 [Colon and Rectum Surgery]

# Evaluation of Treatment Approaches for Pilonidal Sinus Disease, Early Results of the Survey for Surgeons

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**Objective:** Pilonidal sinus is a common disease in the society and discussions related to its etiology and treatment still continues. Despite the consensus in many diseases today, there is no clear algorithm for pilonidal sinus. A 15-question questionnaire prepared for general surgeons in our study aimed to reveal the difference in treatment approaches.

**Material and Methods:** A multiple-choice and categorical questionnaire consisting of 15 different questions prepared after approval of the ethics committee of the Health Sciences University Ümraniye Education and Research Hospital were directed to general surgery specialists. The results were loaded into the data pool prepared with SPSS. The results were evaluated according to percentiles.

**Results:** According to the results of thirty participants who were initially planned with 150 general surgery specialists, the number of experts who had an average of 10-50 pilonidal sinus cases per year was 20 (66.6%) and the rate of application of phenol therapy was 1%. While methods with flap (50%) among surgical methods were preferred, primary repair rate was 30%. The majority of participants suggested postoperative antibiotherapy (80%), it was considered that adequate time has not been reserved for the introduction of pilonidal sinus at national meetings.

**Conclusion:** According to the early results of our study, pilonidal sinus disease is frequently encountered by surgeons. In the treatment, flap methods are primarily preferred in treatment and antibiotherapy is frequently recommended by surgeons after the treatment of the disease.

**Keywords:** Pilonidal sinus, survey, general surgery specialists

## PP-0712 [Colon and Rectum Surgery]

# Gardner Syndrome; Simultaneous Diagnosis and Therapy in Monozygotic Twins

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**Introduction:** It was aimed to draw attention to the rare disease of Gardner Syndrome (GS) by presenting synchronous diagnosis and treatment in monozygotic twins.

**Case 1:** A 16-year-old monozygotic twin male patient underwent panoramic imaging due to dental problems and a suspicious appearance was observed in the mandibula with respect to the osteoma. The maxillofacial computed tomography (CT) of the patient, who was referred to Plastic Surgery, revealed an exophytic, partially lobulated, lesion consistent with osteoma with a diameter of approximately 17 mm in the left mandibular ramus section. This lesion was also described as a 17x12 mm osteoma in the face magnetic resonance (MR) examination. While a few polyps with a diameter of several millimeters were detected in the rectum in colonoscopy, approximately 30-35 polyps were found in all of the other colon segments. Physical examination of the patient revealed a mass of approximately 2x2 cm in the left mandibula and a lipomatous mass of local lesion with a diameter of about 2x2 cm localized under the skin in the left lumbar region. Laboratory parameters, eye examination and thyroid ultrasonography (USG) were normal. Rectosigmoidoscopy revealed no pathology other than mucosal ulcers in the healing process of several polyps excised with cold forceps in the rectum. Esophagogastroduodenoscopy, small bowel passage examination and abdominal MR examinations were normal. Total colectomy and ileocolic anastomosis were performed in the patient.

**Case 2:** The twin of the case 1, was examined concurrently due to the findings of his twin. In CT, an exophytic lesion with regular margins, consistent with osteoma having 15 mm diameter was observed in the left mandibular ramus section. MR showed a lesion consistent with the osteoma that caused the expansion in the left mandibular cortex. Colonoscopy findings were similar to the twin. A mass about 2x2 cm in diameter in the left mandibula and a lipomatous mass with a diameter of about 2x1 cm in the left scapula inferior and one in the nape was detected. Laboratory parameters, eye examination, thyroid ultrasonography, esophagogastroduodenoscopy, small bowel passage graph and abdominal MR were normal. The same surgical procedure was applied to his twin.

**Conclusion:** In GS, gastrointestinal polyposis osteoma is characteristically associated with bone and mesenchymal tissue neoplasms such as osteomas, lipomas, fibromas or desmoid tumors. The development of colorectal cancer before the age of 40 is inevitable in all of the untreated patients. Treatment options include proctocolectomy and permanent terminal ileostomy, restorative proctocolectomy and ileal pouch-anal anastomosis, total colectomy and ileo-rectal anastomosis. There is no consensus on the surgical procedure to be chosen, but rectal involvement and patient factors must be taken into consideration. Total colectomy and ileocolic anastomosis were performed as a result of factors such as the preference of the patients and the family, the rectum being partially preserved, and the socio-cultural level that could provide periodic controls. Establishing GS diagnosis with accurate management of the diagnostic process, beginning with the complaints of the teeth, suggests that clinicians and dentists should be cautious and skeptical of this rare disease in early-onset patients, especially those with extraintestinal findings.

**Keywords:** Gardner syndrome, monozygotic twin, polyposis coli, osteoma, colorectal cancer

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## PP-0713 [Colon and Rectum Surgery]

# Neutropenic Enterocolitis in Oncologic Patient Groups: Presentation of 4 Cases

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Ileocecal syndrome, neutropenic enterocolitis, also known as typhlitis; immunosuppression is defined as the inflammation of the cecum and surrounding tissues seen in patients. Typhlitis, first described in leukemic pediatric patients is the most common gastrointestinal complication in leukemic patients. Although the pathogenesis is not fully understood, neutropenic enterocolitis is thought to be due to bacterial invasion with neutropenia and mucosal injury in immunosuppressed patients. Despite the detection of gram negative rods, gram positive cocci, enterococci, fungi and viruses in damaged mucosa, these are not considered as a diagnostic criterion. Chemotherapeutic agents cause direct mucosal injury and decrease intestinal motility, leading to distention and necrosis which causes neutropenic enterocolitis. Although leukemic infiltration could not be histologically demonstrated in neutropenic enterocolitis cases formed before chemotherapy regimen in acute myeloid leukemia, the existence of other histological findings (mucosal ulcers, intramural hemorrhagic necrosis) show that leukemic involvement plays an important role in the pathogenesis of neutropenic enterocolitis. Despite the fact that neutropenic enterocolitis cases were detected after the taxan group chemotherapeutic agents at the beginning, cases were reported after cytosine arabinoside, gemcitabine, vincristine, doxorubicin, cyclophosphamide, leucovorin and daunorubicin. In this study, four cases of neutropenic enterocolitis were followed and treated at Cerrahpaşa Medical Faculty Hospital between 01/08/2017 and 01/02/2018. Neutropenic enterocolitis is a major cause of mortality and morbidity in immunosuppressed patients. In the cases examined, the disease was observed to be symptomatic when the patient's neutropenia was deepened. Patients were first seen to have fever and abdominal pain, and when they were symptomatic, there was no reproduction in the gaita cultures sent. It was seen that the patients were not suitable for operation because of their deep neutropenia when the patients were symptomatic and that they can be followed by expanding antibiotherapies and cutting oral intake, daily physical examination and laboratory control and intermittent radiographic imaging. The inadequacy of the literature on neutropenic enterocolitis has led to the necessity of further studies on this subject.

**Keywords:** Typhlitis, neutropenic enterocolitis, ileoecal syndrome

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## PP-0714 [Colon and Rectum Surgery]

# Giant Juvenile Polyp in Adult Patient

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The polyp is the name given to macroscopically visible lesions originating from an epithelial surface. Polyps are divided into two groups according to their histological features as neoplastic or non-neoplastic. Non-neoplastic polyps are divided into 4 groups

as inflammatory, hamartomatous, submucosal (lipom, lymphoid polyp) and hyperplastic polyp. Inflammatory polyps are polyps that have gland structure but atypia is not observed in the epithelium. A special form is juvenile polyp. Juvenile polyps are also classified as hamartomatous at the same time. Juvenile polyps (JP) are polyps that are often seen in childhood and young adult ages. It commonly occurs at 2-4 years of age. It is often seen as an isolated juvenile polyp and is usually located on the left side. They can be pedunculated and have a large size. In some cases they can be autoamputated and thrown. The most common symptom is painless rectal bleeding. Our patient was a 62-year-old male patient. He had known hypertension for 10 years and 2 cardiac stent histories due to coronary artery disease 5 years ago. In the laboratory tests performed, Hb value was found as 6.2 g/dl and Hb level was increased to 3.1 g/dl with 3 units erythrocyte replacement. Esophagogastroduodenoscopy of the patient, from whom esophagogastroduodenoscopy and colonoscopy were requested to investigate etiology of the anemia, revealed that esophagus, fundus and cardiac mucosae were normal, stomach corpus and antrum mucosae were edematous and bulbus and postbulber mucosa were normal. Polypectomy was performed in the polyp having a 0.5 cm diameter on the sigmoid colon in the colonoscopy, and a pedunculated polyp, 10 cm long from its stalk to the tip, on the transverse colon with the tip necrosis ulcerative was observed and bx was taken. In the pathological evaluation, sigmoid colon polypectomy material was reported as hyperplastic polyp. Transverse colon polyp biopsy revealed infected superficial polypoid tissues which were ulcerative in focal areas. No active pathology was observed in the physical examination. The required bowel cleansing was performed and the patient underwent a total excisional recolonoscopy. In the colonoscopy performed, a pedunculated polyp with ulcerative tip having a length of about 10 cm, starting from the middle of the transverse colon and extending to the hepatic flexure, was observed. The polyp seen was caught all the way from the stalk with endoscopic snare. It was cut by electrocoagulation current. Then it was taken out with the capture forceps. Other segments of the colon were evaluated as normal. There were no complications during the procedure. JPs are typically considered as hamartomatous lesions with low malignant potential. Juvenile polyps are also seen in juvenile polyposis syndrome (JPS). JPS should have family history and 3-5 juvenile polyps. JPS is reported to be a risk factor for colorectal cancer and JPS patients are significantly more likely to develop colorectal cancer than the general population. One juvenile polyp was detected in our patient. The most common symptom is painless rectal bleeding. In our case, it caused painless hemorrhage. Anemia was present at the time of admission to the hospital and it was observed that the control value of Hb increased after endoscopic resection. In conclusion, although juvenile polyps are frequently seen in childhood and younger ages, it should be kept in mind that they may be seen in advanced ages and they can cause anemia.

**Keywords:** Polyp, juvenile, giant

## PP-0715 [Colon and Rectum Surgery]

# Can Simultaneous Resection Be Performed Effectively in Synchronous Liver Metastases of Colorectal Cancer?

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**Objective:** It is still controversial whether the choice of surgical treatment should be sequential or simultaneous resection for colorectal cancer patients with synchronous liver metastases. In our center, synchronous colorectal cancer and liver resection were adopted as the first surgical option in all patients, diagnosed with synchronous liver metastasis colorectal cancer, who were expected to undergo R0 resection, regardless of the localization of the primary tumor, the number of metastases in liver, their size and residential location and who would be expected to have sufficient liver volume. We aimed to evaluate the short-term surgical and long-term oncologic outcomes of simultaneous colorectal and liver resection in our patient group whose possible selection bias was prevented by this surgical strategy.

**Material and Methods:** Fifty - six patients who were operated with synchronous liver metastasis colorectal cancer diagnosis between January 2010 and January 2017 were retrospectively reviewed. Demographic characteristics, medical findings, surgical treatments, postoperative follow-ups, pathological results and long-term follow-up data were recorded.

**Results:** The mean age of the patients was  $60.80 \pm 11.38$  years and 37 patients (66.1%) were male. Sixteen (28.6%) of the primary tumors were located in the right colon, 27 were in the left colon (48.2%) and 13 (23.2%) in rectum. The number of liver metastases ranged from 1 to 32 and there were more than three metastases in 24 patients (42.8%). Bilobar liver metastasis was present in 18 patients (32.1%). The largest metastatic diameter of the patients ranged from 9 to 105 mm, with an average of 25 mm. Preoperative chemotherapy was performed in 24 patients (42.9%) and preoperative radiotherapy was applied in 6 patients. Laparoscopic colorectal resection was performed in 24 patients (42.9%). Major liver resections were performed in 8 patients (14.3%). Radiofrequency ablation was performed in 22 patients (39.3%) in addition to liver resection. The mean duration of operation was  $316.14 \pm 99.66$  minutes. Postoperative minor complications were seen in 18 patients (32.1%) and major complications in 15 (26.8%) patients. The average hospital stay was 8.5 days. The mean follow-up period was  $34.49 \pm 20.96$  months. The mean survival was  $59.14 \pm 5.65$  months. Overall survival was  $91.0 \pm 3.8\%$  at 1 year and  $48.1 \pm 9.4\%$  at 4 years. Mean disease-free survival was  $42.56 \pm 5.65$  months. Disease-free survival was  $71.4 \pm 6.0\%$  at 1 year and  $32.8 \pm 7.6\%$  at 4 years.

**Conclusion:** A clear treatment algorithm has not been established in patients with synchronous liver metastatic colorectal cancer. Studies comparing simultaneous resection with sequential resections reported that simultaneous resection shortened the length of hospital stay, did not increase postoperative morbidity and mortality, and did not cause any difference in disease-free survival and overall survival. In this study, we found that primary tumor location, increased number of liver metastases, bilomer metastasis location and major liver resection did not cause a significant difference on disease-free survival, overall survival, and major complications. As a result, it was seen that simultaneous resection in experienced centers can be used as a surgical option.

**Keywords:** Simultaneous resection, colorectal cancer, synchronous liver metastasis

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## PP-0716 [Colon and Rectum Surgery]

# Case Report of Appendiceal Mucinous Carcinoma

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**Introduction:** The primary adenocarcinoma of the appendix is at a rate of 0.1-1.35%, mostly occurring in the 50-60 age range. It is 3 times more common in males than females. Appendiceal carcinomas, unlike carcinoid tumors, usually appear at the base of the appendix. Significant mucin production is found in these tumors. As acute appendicitis, acid or palpable mass may be detected in patients, they may be detected peroperatively and incidentally.

**Case:** A 66-year-old female patient was operated by a gynecology clinic with the diagnosis of leiomyoma. Appendectomy was performed in the patient who was consulted to us peroperatively with appendicitis suspicion and was evaluated as appendicitis. There was no other pathology in the abdomen. Reoperation decision was taken after obtaining the pathology result as mucinous ca. The patient's physical examination was normal and there was no tenderness. Laboratory values were within normal limits. No other pathologic findings were found in the computed tomography. The patient underwent right hemicolectomy and ileotransversostomy. No early complications were seen in the postoperative follow-up of the patient. As a result of the pathology of the second operation, residual tumor tissue was not found. Chemotherapy treatment was started with the decision of the Oncology Council.

**Conclusion:** There are 5 subtypes of primary adenocarcinoma of the appendix histologically: mucinous adenocarcinoma, colonic adenocarcinoma, adenocarcinoid, signet-ring cell carcinoma and malignant carcinoids. Appendiceal adenocarcinomas are characterized by a very high amount of mucin production and a well-differentiated morphological structure. However, pseudomyxoma may also lead to a picture of a tumor called peritonei spreading across all peritoneal surfaces and a minimal involvement of peritoneum-covered organs. Most patients with appendiceal adenocarcinoma present with symptoms (appendicitis, mass, abdominal carcinomatosis) and 25% of them are detected incidentally. Some studies have suggested that computerized tomography is also effective in preoperative diagnosis. The surgical procedure recommended in appendiceal adenocarcinomas is right hemicolectomy. Cytoprotective surgery is recommended in the presence of pseudomyxoma peritonei. Prognosis is related to the stage of the patient and the type of tumor. It has been reported that signet-ring cell carcinoma is the worst of them and malignant carcinoids are reported to have the best prognosis than others.

**Keywords:** Appendix, mucinous, carcinoma

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## PP-0717 [Colon and Rectum Surgery]

# Comparison of The Time of The Operation of Patients with Acute Appendicitis and Their Results

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**Objective:** Acute appendicitis is a rapidly progressive inflammatory disease and its standard therapy is surgery. Lately, there are studies in which antibiotic treatment of acute appendicitis is reported in centers where no night surgery can be performed. In this study, we investigated the effect of the waiting period of the patients, with acute appendicitis, who were waiting because of patient or hospital related reasons on complications.

**Material and Methods:** In our study, the files of the patients who received acute appendicitis diagnosis and underwent appendectomy between October 2014 and February 2015 were screened. Literature was reviewed and the patients with preoperative waiting time <10 hours were classified as Group A (Emergency), and ≥10 hours as Group B (Early). Demographic data, co-morbidities, time between diagnosis and the time to be taken to the operation, duration of operation, hospital stay, antibiotic usage, analgesic requirements, pathology reports and reapplication status were recorded.

**Results:** 160 patients were included in the study. There were 79 patients in Group A and 81 patients in Group B. In the group A and group B, the F/M distribution was 23/56 and 27/54. The mean age of group A and group B was  $31.9 \pm 11.5$  years (range: 18-66) and  $30.8 \pm 8.8$  years (range: 18-65 years) ( $p: 0.882$ ). The mean preoperative waiting period was  $4.4 \pm 2.0$  hours (range: 1-9) in Group A and  $15.1 \pm 4.3$  hours (range: 10-32) in Group B ( $p < 0.001$ ). Mean operative times were found as  $50.3 \pm 16.2$  min (range: 20-90) in Group A and  $54.0 \pm 12.6$  min (range: 20-80) in Group B ( $p: 0.040$ ). The hospital stay was  $30.4 \pm 13.5$  hours (range: 8-96) in Group A and  $30.3 \pm 8.3$  hours (range: 11-48) hours in Group B ( $p: 0.391$ ). While wound site infection was seen in 3 patients in Group A and 5 patients in group B, there was no statistically significant difference ( $p: 0.720$ ). The intra-abdominal abscess was observed in only 2 patients in Group B, but there was no statistical difference between the two groups ( $p: 0.497$ ). In the pathological results, 75 patients (94.9%) in Group A were reported to have acute appendicitis, 3 patients (3.8%) had lymphoid hyperplasia, and 1 patient had (1.3%) mucinous neoplasia in Group A; In Group B 78 patients (96.3%) were reported as acute appendicitis and 3 patients (3.7%) were reported as lymphoid hyperplasia, with no statistically significant difference between the two groups ( $p: 0.837$ ).

**Conclusion:** The preoperative waiting time of the patients with uncomplicated acute appendicitis in the emergency service has no negative effect on the complications. Randomized controlled studies in larger series are required.

**Keywords:** Appendicitis, interval appendectomy, uncomplicated appendicitis

## PP-0718 [Colon and Rectum Surgery]

# Chronic Anal Fissure Treatment: Is Open Lateral Internal Sphincterotomy (LIS) A Safe and Adequate Option?

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**Objective:** Anal fissure is a longitudinal scar in the anoderm just below the dentate line and is usually found in the posterior midline of the anus. It is one of the most common pathologies of the anorectal region and can alter the quality of life because it causes pain and/or emotional stress during defecation. The causes are still unclear, with the passage of rigid fecal material, and it is thought to be due to a significant increase in sphincter pressure (even at rest). The American Society of Colon and Rectal Surgeons (ASCRS) recommends conservative treatment with stool softeners, high fiber diet and warm water sitting bath as initial treatment. However, patients often need surgical intervention. Today, various techniques are used for surgical treatment of CAF. Among these techniques, anal dilatation and lateral internal sphincterotomy (LIS) are the most common ones. Other commonly used methods are botulinum injection and sacrum neuromodulation. If LIS is not performed carefully and properly, it can lead to undesirable results such as early recurrence and anal incontinence. In this retrospective study, we evaluated early and long-term outcomes of patients who underwent open lateral internal sphincterotomy due to chronic anal fissure.

**Material and Methods:** This is a retrospective study in which 417 patients who underwent LIS were included in the study due to chronic anal fissure in our General Surgery Department between January 2010 and October 2017. The files of the patients were retrospectively screened and demographic data (gender, age), medical histories and symptoms and findings at the admission were recorded. All patients were contacted one by one to evaluate the response (relief of pain and evaluation of fissure erythema and/or inflammation) to the treatment in the first-second- fourth and eighth week, complications during follow-up and disease recurrence.

**Results:** Of the 417 patients included, 228 (54.7%) were female, 189 (475.3%) were male and mean age was 46.1 (17-83) years. The main complaints of patients were; pain (n: 406, 97.4%), bleeding (n: 325, 77.9%), constipation (n: 154, 36.9%) and pruritus (n: 71, 17%). There was pain relief in 263 (63.1%) patients in the first week, in 322 (77.2%) patients in the second week, in 363 (87%) patients in the fourth week and in 381 patients (91.4%) in the eighth week. In the early postoperative period, two patients had perianal hematoma and three patients developed perianal abscess. Patients relaxed after drainage. Fifteen patients had recurrence and seven patients had incontinence (gas in 4 patients, fluid in 3 patients). It was determined that 10 of the patients with recurrence were operated once more and two of them were operated twice more. The complaints of all patients with gas incontinence and a patient with fluid incontinence regressed in the fourth postoperative month, while the remaining three patients had persistent fluid incontinence.

**Conclusion:** When the long term results of lateral internal sphincterotomy are evaluated, it is an effective, reliable and repeatable method in chronic anal fissure treatment.

**Keywords:** Anal fissure, chronic, lateral internal sphincterotomy

## PP-0719 [Colon and Rectum Surgery]

# Colon and Rectum Surgery with Hand-Assisted Laparoscopy (HALS)

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Minimal invasive applications in colon and rectum surgery have become increasingly widespread and HALS (Hand Assisted Laparoscopic Surgery) method has begun to find a place for itself in this area with the advantages it offers. In addition to less cosmesis and postoperative pain, the contribution of the tactile sensation to the video image facilitates the identification and dissection of the tissues and thus increases the safety of the operation. It has also been reported in the literature that it also reduces the rate of switching to open surgery and the length of stay in the hospital. In this report, we presented the cases who underwent hand-assisted laparoscopic colon and rectum surgery due to invasive cancer. The mean age of our 5 patients (2 male) was 67,8 (50-84) and the mean BMI was 32,1 kg/m<sup>2</sup> (29,2-34,6). Extended right hemicolectomy, right hemicolectomy and low anterior resection operations were respectively performed by HALS method in the patients whose tumor locations were in transverse colon, hepatic flexure, rectosigmoid junction (two patients), and upper rectum. Three patients with rectosigmoid junction and upper rectum-localized tumors underwent colonic stenting with SEMS (self-expanding metallic stent) by a surgeon who performed the operations at an average of 11 days before surgeries (8-14) due to tumor-related acute intestinal obstruction and bridging was performed to the elective surgery. For the hepatic flexure tumor with a small tumor size, safe distal border marking was conducted by the surgeon performing colonoscopy with carbon stain in the preoperative period. Ports to be used for removing the resected surgical material out of the abdomen for hand assistance were placed in the suprapubic area with a standard 8 cm transverse incision. Trocar sites for camera and work tools were selected according to tumor localization. Energy devices for surgical dissection and plastic and metallic clamps for vasculer closure were used. Anastomoses were extracorporeally performed at the hand port site using linear and circular staplers. No patient had diverting stoma applied for preventive purposes. The mean duration of surgery was estimated to be approximately 153 minutes (140-165). There were no surgical complications in our patients. A patient undergoing low anterior resection died on the second postoperative day due to cardiac arrest associated with AMI. In our extended right hemicolectomy patient, additional morbidity was not observed except for the conservative treatment with blood products for bleeding as a postoperative leakage. Although no scoring system was used in the controls of the patients, it was observed that their satisfaction in terms of surgical pain and cosmesis was very high. It was confirmed that resections were performed in accordance with the oncological principles and pathology results. We think that hand-assisted laparoscopic colon and rectum surgery applications with this limited case series are safe, compatible with oncologic principles and patient satisfaction is better than open surgery with cosmetic results.

**Keywords:** Hand-assisted laparoscopic surgery, HALS, colon and rectum surgery, minimal invasive surgery

## PP-0720 [Colon and Rectum Surgery]

# Multidisciplinary Approach to the Fournier Gangrene and the Importance of Colostomy

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**Introduction:** Fournier gangrene; is a necrotizing, infectious, polymicrobial disease that spreads through the fascia starting from the perineal and genital regions and progresses rapidly with high mortality and morbidity. Urgent diagnosis and treatment is necessary since delay in treatment increases mortality considerably. Predisposing factors such as vascular disease and obesity, especially DM, do not only increase the susceptibility but also cause difficulty in treatment. Here, we aimed to examine the fournier gangrene case with DM diagnosis who was bed dependent due to prosthetic infection and CVA with multidisciplinary approach.

**Case:** A 65-year-old male patient presented with a complaint of drainage at the prosthesis site. While the patient with known DM and previous CVA was able to walk with support, he had implantation of prosthesis to left hip joint nine months ago, and he had second CVA during operation and right hemiparesis developed, followed by compression of the sacral area due to immobilization. The patient presenting to the orthopedic outpatient clinic with current complaints had urinary catheter and pyuria was also observed in urinalysis. The patient was hospitalized with physical examination and analysis results, and with the diagnoses of

urinary tract infection, prosthetic infection and Fournier gangrene in the sacral area and he was taken to emergent operation. In the operation intervened by orthopedics and general surgery, the prosthesis of the patient was removed, deep debridement was performed in the sacral area with Fournier gangrene, and colostomy was performed to prevent gaita contamination. Wide spectrum antibiotherapy was administered by infectious diseases department, insulin was regulated by the department of internal medicine because the patient had uncontrolled diabetes. The patient with white blood cell count of 16600/mm<sup>3</sup>, CRP 40 mg/dl, sedimentation 99 mm/h was followed by applying dressing, debridement and occasionally negative pressure wound treatment. Although debridement was performed with preservation of the anal sphincter, the entire perianal region was resected in the following debridements. Antibiotherapy was reviewed again according to the results of deep tissue and urine culture. He received broad spectrum antibiotic treatment for approximately 24 days. The patient whose leakage ceased and who had tissue healing, white blood cell count dropped to 8500/mm<sup>3</sup>, CRP 4.5 mg/dl, sedimentation 39 mm/h was discharged by suturing the wounds and recommending moxifloxacin 400 mg tb 1x1. Aggressive resuscitation, broad spectrum antibiotic use, early surgical drainage, and glucose control in patients with DM are important in the treatment of Fournier's gangrene. Prevention of wound and stool contamination is beneficial for wound healing; so colostomy may be needed in some cases. There are studies in the literature that report a decrease in dressing numbers and hospital stay with negative pressure wound dressings.

**Conclusion:** Fournier's gangrene, which requires immediate diagnosis and treatment necessitates follow-up by infectious diseases, surgical units and internal diseases in case of comorbidities. We wanted to present this case in order to show how important the multidisciplinary approach is in the Fournier gangrene, with mortality of about 16-40%, which is difficult to follow in a secondary health care institution, where there is not a microbiology laboratory, and the culture taken is sent by vehicle to the central state hospital.

**Keywords:** Antibiotherapy, Fournier gangrene, multidisciplinary approach

## PP-0721 [Colon and Rectum Surgery]

# Our Short-Term Results in Tube Ileostomy Technique Providing Complete Fecal Diversity

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**Objective:** Conventionally, loop ileostomy is widely used today to protect distal anastomoses. However, problems such as ileostomy-associated morbidities and the need for second operation are present. Although tube ileostomy is a defined method, it could not replace loop ileostomy due to effectiveness of the method and application problems. In this study, we presented our tube ileostomy technique which provided complete diversity and short-term results.

**Material and Methods:** In this prospective study, it was planned to open tube ileostomy in the patients for whom protective ostomy was seen necessary in order to protect the anastomosis at the distal anastomosis. Following anastomosis after open or laparoscopic tumor resection; the ileocecal valve was punctured with a purse string suture to the antimesenteric wall of the terminal ileum at a distance of 30 cm, and a 7.5 mm spiral endotracheal tube was sent from the skin to the abdominal cavity and the purse was passed through the suture and fixed to the proximal ileum. The bubble of the tube was inflated to fill the lumen. Ileum was attached to the abdominal wall with 2 sutures from the side of the tube. In order to provide complete fecal diversity, the intestine was suspended by passing the penrose drain through the meso of the ileum at 5 cm distal of the area where the tube entered the ileum and the ends of penrose were taken out of the 5 mm incision made in the skin to enable the intestinal lumen to be completely occluded. On the first postoperative day, liquid foods were started and the patients were discharged and followed up after the bowel contents came out of the tube. Penrose drain was withdrawn on the 14th postoperative day and the patient was followed for 1 week for defecation. The patient was called for control and the balloon of the tube was deflated and withdrawn on the 21st postoperative day. It was then recorded how many days the bowel contents came from the tube.

**Results:** The tube ileostomy technique described was applied to 32 patients between June 2016 and February 2018. The median age of the patients was 61 (31-82) and twenty-four (75%) of them were male. 26 (81%) patients were operated due to rectum tumor, another 6 patients due to sigmoid tumor, cecum tumor, ulcerative colitis, bladder tumor rectum invasion and rectovaginal fistula. 29 (91%) patients underwent open and 3 (9%) patients underwent laparoscopic surgery. The hospital stay was 4 (3-7) days. There was no defecation in any patient in the presence of a penrose drain. Three patients (9%) were unable to defecate until the penrose drain was withdrawn, but they defecated after the tube was withdrawn. After the tube was withdrawn, patients were observed to have median 6 (1-30) days of recovery of the withdrawal site of the tube and no permanent fistula developed in any of the patients. Cellulitis was observed around the tube in 2 patients and it was improved by antibiotherapy.

**Conclusion:** The tube ileostomy technique we have described is an effective method to provide full fecal diversity. It is a preferred method instead of loop ileostomy due to the fact that there is no need for second operation, easy to apply and that no complications are seen due to loop ileostomy.

**Keywords:** Tube ileostomy, fecal diversion, colorectal anastomosis

## PP-0722 [Colon and Rectum Surgery]

# A Rare Case: Adult Hirschsprung's Disease

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**Introduction:** Hirschsprung's disease is a congenital disease characterized by the absence of ganglion cells in the distal colon and the myenteric plexus in the rectum. The disease often seen in newborn and childhood, is rarely seen in adults. We aimed to present an adult Hirschsprung patient treated with sphincteromyotomy.

**Case:** A 22-year-old female patient with a complaint of constipation and the complaints of bloating, hand-assisted defecation from childhood, was diagnosed with Hirschsprung's disease because of manual halas and rectum biopsy were performed three years ago and biopsy material was aganglionic. Standing direct abdominal x-ray showed colonic dilatation and colonic air-fluid level. Intravenous contrast-enhanced abdominal CT revealed dilatation of the descending colon, sigmoid colon and rectum up to 12 cm, and sudden constriction of the 12-mm segment of the anal region. Laparoscopic exploration and biopsy were planned to detect the transition zone. During surgery, the ganglion cells were present in the biopsies taken from the sigmoid colon and the anterior wall of the rectum without opening the pelvic peritoneum. It was decided to perform sphincteromyotomy for the patient who was considered to be a short segment Hirschsprung. 6-7 cm longitudinal myotomy was performed starting from the dentate line. The ganglion cell was positive in the rectal biopsy taken from the proximal of the myotomy. The patient was discharged on the postoperative 3rd day. In the follow-ups his distention regressed and his defecation returned to normal. It was observed that colon and rectum dilatation disappeared in the first month contrast-enhanced colon graph, and there was no contrast in the rectum in the post-defecation graphy.

**Conclusion:** In Hirschsprung patients who are not diagnosed until adulthood, it is known that the symptoms are more subtle than the patients diagnosed in pediatric age due to the shortness of the aganglionic segment, and that the patients are often treated symptomatically with constipation. In our case, it was revealed that the disease was short segment by the help of laparoscopy and was treated with sphincteromyotomy which is described as an effective treatment method with few cases in short segment disease. This method should be kept in mind in the treatment of adult Hirschsprung's disease because of its advantages such as less invasiveness compared to other methods, and the absence of stoma opening necessity.

**Keywords:** Adult Hirschsprung, myotomy, Hirschsprung, sphincteromyotomy

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## PP-0723 [Colon and Rectum Surgery]

# The Cause of a Rare Acute Appendicitis; B-Cell Lymphoma

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**Introduction:** Acute appendicitis; is inflammation that starts from the appendix vermiformis mucosa and covering all the layers over time. Obstruction of appendix lumen is the primary cause of appendicitis. The most common cause is fecalites. Less frequently; lymphoid tissue hyperplasia, tumors, seeds of vegetables and fruit and intestinal parasites. We wanted to share a case of lymphoma after routine appendectomy surgery.

**Case:** A 40- year-old male patient was admitted to the emergency department with complaints of abdominal pain starting 2 days ago. In the physical examination patient with WBC 16700, defense and rebound were positive in the lower right quadrant. The patient was admitted to the clinic with the diagnosis of acute appendicitis which was supported by radiological imaging methods. The patient was operated on the same day and appendectomy was performed. Patient without postoperative complication was discharged on the 1st day. The patient's pathology result was reported as high-grade B-cell lymphoma. The patient was called and was consulted to the medical oncology and no additional treatment was planned.

**Conclusion:** It should not be forgotten that lymphoid tissue hyperplasia and tumors among the causes of acute appendicitis are rare. The pathology result of the patients should be absolutely followed in the post-appendectomy period, which is one of the most frequent emergency conditions of the general surgery.

**Keywords:** Acute appendicitis, acute abdomen, B-cell lymphoma



## PP-0724 [Colon and Rectum Surgery]

## Atypically Localized Appendix: Video Presentation

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Video shows appendix detected in neighborhood of gall bladder during exploration in the patient for whom elective laparoscopic cholecystectomy was planned with the diagnosis of cholelithiasis. Since the complaint of right upper quadrant abdominal pain that the patient had experienced before the operation was thought to be related to this appendix with atypical location, it was decided to perform laparoscopic appendectomy after cholecystectomy in the same session. Appendix was suspended with a grasper to reveal its meso. Meso was cut by coagulating with energy device. The appendectomy was then completed by closing the appendix stump with two plastic polymer endoclips.

**Keywords:** Appendix, atypical, laparoscopic

## PP-0725 [Colon and Rectum Surgery]

## Differences between Characteristic, Histopathologic and Cancer Morphology of Right and Left-Side Colon Cancer Patients

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**Objective:** One million people are diagnosed with colon cancer (CC) every year in the world, and this type of cancer constitutes 9% of all cases. Recent reports indicate that left and right-sided colon cancers display distinct clinical and biological features. In particular, it has been found that right-sided colon cancer is predominantly present in women and young patients, and left-sided cancers predominate in men and elderly patients. Although the demographic, hereditary and environmental characteristics of the patients were examined, no definitive data was available on the cause of this condition. It is assumed that it may be dependent on biological behavior of the tumor. There is no study in our country about this issue. In this study, we aimed to classify patients diagnosed with colon cancer according to the localization of the tumor, to determine whether there is age and gender relation and to reveal the differences between clinical symptoms, cancer invasion depth, cancer morphology and histology.

**Material and Methods:** 493 patients who were operated due to colon cancer in our Department of General Surgery between January 2011 and July 2017 were included in this retrospective study.

Group 1 (Right colon located tumors): Cecum, ascending and transverse colon tumors

Group 2 (Right colon-located tumors): Splenic corner, descending and sigmoid colon tumors

Patients' files were reviewed retrospectively. Demographic data (gender, age), medical histories, admission symptoms and findings, laboratory and radiological data, preoperative staging scores, tumor localizations, lymph node dissection numbers and positivity rates, hospitalization durations, recurrence and survival of the patients were evaluated.

The patients included in the study:

1. Patients diagnosed with colon cancer
2. Patients undergoing surgical treatment
3. Epithelial malignancies (Adeno- squamous carcinoma)

The patients excluded from the study:

1. Benign tumors
2. Metastatic patients
3. Patients with synchronous tumors
4. Patients undergoing only endoscopic submucosal dissection (ESD)
5. Non-epithelial malignancies (such as lymphoma, carcinoma)
6. Appendicular carcinoma, rectum and anal tumors

**Results:** Of the 493 patients who were included in the study, 200 of them were in Group 1 and 293 of them were in Group 2, 61.5% of them were male and 38.5% of them were female. The demographic and clinical data of the patients are given. There was a statistically significant difference between the groups in terms of gender, age distribution and admission symptoms. Tumor localization distribution of patients is given. According to this, there were patients with ascending colon at most in Group 1 and patients with sigmoid colon tumor at most in Group 2. Histological and morphological differences between the groups are given.

**Conclusion:** According to our study; although the right colon tumors are seen at younger ages than the left colon tumors, the presence of poor histological type and mucinous component are more frequent. Depending on these, their prognosis are worse.

**Keywords:** Cancer, colon, localization, survival

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## PP-0727 [Colon and Rectum Surgery]

# Appendicitis Mucinous Cystadenoma: A Rare Case Report

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Appendix mucocele is an uncommon condition in which the appendix is often asymptomatic and incidentally detected characterized by a cystic mass with mucus accumulation and dilatation as a result of obstruction of appendix lumen. In this case report, we examined the patient who was admitted to our outpatient clinic with abdominal pain which was intermittent in the lower right for approximately 2 months. Imaging was performed on the basis of the palpable mass detected in the right lower quadrant in the physical examination. As a result of the imaging, a 7.5 cm mass consistent with appendiceal mucocele was detected. The patient was scheduled for conventional appendectomy under elective conditions. The cystic mass was seen in the appendix and the appendectomy was performed. The patient was discharged without any problems on the first postoperative day. Pathologic diagnosis was mucocele due to mucinous cystadenoma and no malignancy finding was found.

**Keywords:** Appendix, mucocele, mucinous cystadenoma

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## PP-0728 [Colon and Rectum Surgery]

# Nonoperative Therapy of Solitary Cecum Diverticulitis

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**Objective:** Solitary diverticulum of cecum is a rare and often asymptomatic pathology. Since it is confused with acute appendicitis, the diagnosis is usually made during the operation and the preop diagnosis is usually skipped. We aimed to investigate our approach to diagnosis and treatment of these rare cases.

**Results:** In our study, we presented 6 cases with a complaint of right lower quadrant pain of the abdomen and examined with the suspicion of acute appendicitis but diagnosed as solitary cecal diverticulitis and treated nonoperatively. The mean age of the patients was 51.1 (32-67) and 4 of the patients were female and 2 of the patients were male. Clinical findings were fever, leukocytosis and increased CRP with tenderness in the right lower quadrant. The mean leukocyte values of the patients were 13,700/mm<sup>3</sup> (9800-19,400/mm<sup>3</sup>) and CRP 38 (24-87). The patient was diagnosed with solitary cecal diverticulitis in contrast enhanced tomography performed due to the normal appearance of the appendix in the abdominal ultrasound. They were located at the anterior of the cecum. Medical treatment was applied to five patients and percutaneous drainage with medical treatment were applied to one patient. Patients were discharged on a mean of 5.3 (4-7) days without any surgical operation. The clinic follow-up of the patients in the outpatient clinic was without any problem.

**Discussion:** Solitary diverticulum of the cecum is a rare pathology that is detected when complications such as diverticulitis, perforation or bleeding develop. Contrary to other colonic diverticula, since they are composed of full-thickness colon wall, the picture that can develop due to lumen occlusion is generally similar to acute appendicitis. However, it is differentiated from acute appendicitis by the fact that the pain is longer and the complaints of lack of appetite/nausea are rarely seen. Usually pre-diagnosis is skipped and the diagnosis is made during surgery. Diverticula, especially located posterior to the cecum, can be rarely mixed with the tumor when they become complicated. Preop diagnosis is made by radiologic images with suspicion of clinical picture. Especially if the appendix is in normal appearance in contrasted abdominal tomography and is recognized by the presence of inflamed diverticulum, these patients can be treated medically without operation. However, there is no standardization of diagnosis and treatment due to preoperative skipping and rare occurrence.

**Conclusion:** Cecum diverticulitis should be kept in mind in case clinical onset is different and the appendix has a normal appearance radiologically in the patients presenting with acute appendicitis. Pre-operative diagnosis is important because the treatment is provided by medically without requiring surgery that may cause extensive resection.

**Keywords:** Acute appendicitis, nonoperative treatment, solitary withdrawal diverticulitis

## PP-0729 [Colon and Rectum Surgery]

# Long Term Results of Treatment of Sinus Pilonidalis With Crystallized Phenol

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**Objective:** We published our first 8-year (95%) successful outcomes of crystallized phenol treatment in sinus pilonidalis treatment in 2004 and our results in operated recurrent cases (91%) in 2010. Later this method gained popularity and became a subject of many studies. Now, we thought to present our 20-year results about this subject to better reveal the efficacy of the treatment.

**Material and Methods:** Data of patients between March 1996 and February 2015 were prospectively collected and retrospectively analyzed. Operated recurrent patients with less than one year of follow-up were excluded from the study. Patients' demographic information, communication information, habits, skin color, family anamnesis, height, weight, BMI (BMI <30 and BMI >30), hairing state, whether the sinus is acute or chronic and the number of holes were recorded. It was investigated whether the above factors affect the number of applications and recurrence.

**Results:** 88.6% of the patients were male. Mean age was 26.9, mean BMI was 26.2. 52% of the patients had no habits like smoking and alcohol. The average duration of illness before initiation of treatment was two years. Patients were followed for at least 1 and at most 20 years (mean 4 years). In 38% of our patients, family history was positive and 80% was at chronic state at the time of admission. The number of application was 2.1 and the duration of application was 8.6 weeks. 1026 patients suitable for our criteria were included in the study. During the follow-up period, 652 patients had no problems. Of the 193 patients, 59 of them with recurrence and could be reached, were treated again by us and 45 patients who did not have a serious problem at that time preferred to be operated. 89 patients from the same group did not receive any treatment after recurrence and the disease still continues. No recurrences were seen within the time that 154 patients could be reached from later unreachable patients. Our success rate was 84.3%. Patients with recurrence have a lower age than relapsed group. The recurrence rate was higher in smokers (p <0.05). The recurrence rate was higher in the patients who had more illness in the previous period (p <0.05). The recurrences were higher in the group with BMI > 30 (p <0.044). Gender was not effective in recurrence. Recurrence was higher in the patients who had more holes and whose number of applications was more and the duration was longer and family history was more positive (% p <0.05). the history of much sitting, skin color, hairing state, and acute or chronic sinus did not affect recurrence.

**Conclusion:** The long term results of sinus pilonidalis treatment with crystallized phenol are quite successful. The factors involved in the recurrence of this treatment are; having BMI > 30, younger age, familial predisposition, smoking habit, the length of time before treatment, and increased number of holes. The first choice in the treatment of sinus pilonidalis should be crystallized phenol application because it is cheap, outpatient application can be made, it is noninvasive and easily repeatable, it has comparable results with surgical procedures and it doesn't cause work and power loss in the patient.

**Keywords:** Sinus pilonidalis, treatment, crystallized phenol

## PP-0730 [Colon and Rectum Surgery]

# A Rare Pathology Imitating Acute Appendicitis: Cecum Diverticulitis Perforation

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**Introduction:** Colonic diverticula are often resected with sigmoid colon localization. Its frequency in population is quite high. However, cecum diverticula are rare. Solitary cecum diverticula are seen in 80% of cases in 2.5 cm distance from ileocecal valve and 50% in anterior of the colon. The inflammation of the diverticula present in the ascending colon shows itself as pain, fever

and peritoneal irritation in the right lower quadrant. This picture is usually confused with acute appendicitis. The diagnosis is usually made intraoperatively.

**Case:** A 72-year-old female patient was admitted to our clinic with the complaints of abdominal pain and nausea for 3 days. Tenderness, defense and rebound were detected in the lower quadrant in physical examination. A total blood count of 10500/mm<sup>3</sup> was seen in the patient with a fever of 37.2 ° C. Abdominal tomography (CT) was performed in the patient with an appendectomy history 10 years ago, and it was reported that a remarkable level of inflammation was observed in cecum and ileocecal region, the appearance was significant in terms of acute appendicitis, but appendix was not distinguishable within this inflammation field. It was observed that the cecum wall was inflamed and adhered to the abdominal wall. It was separated by blunt and sharp dissection. Perforated diverticulitis was observed and then the colon wall was primarily repaired one by one with 2/0 absorbable vicryl suture. The abdomen was washed. 1 drain was placed and the operation was completed. Ceftriaxone 2 g/day and ornidazole 1 g/day was started for the patient. Oral intake was started on the 2nd postoperative day and the patient was discharged on the 4th day postoperatively. Histopathological examination revealed that there was inflammatory infiltration and fibrosis in the diverticulitis which was resected from the cecum and true solitary cecum diverticulum involving the entire intestinal layer was detected. Furthermore, no inflammatory bowel disease, dysplasia and malignancy were detected.

**Conclusion:** Cecum diverticula, especially solitary diverticula, are rare and usually asymptomatic lesions. They are mostly seen on the anterior part of the cecum. When compared to distal colonic diverticula, they are usually true diverticula that contain all the layers. Cecum diverticulum is detected in 1 out of 300 patients for whom appendectomy is planned and performed. It is emphasized in the literature that it is necessary to suspect of cecum diverticulum in Asian patients, with previous appendectomy, having right lower quadrant pain which lasts longer than 24 hours. It may rarely imitate perforation due to malignancy. Other causes of perforation include cecum tumors, foreign body perforation, ameboma, patient with burn, tuberculosis and iatrogenic causes. Antibiotic therapy may be given if appendicitis is excluded as long as there is no perforation. Solitary diverticula on the anterior part of the cecum may be suitable for laparoscopic surgery, but laparoscopic intervention may not be easy in the lateral and posteriorly located ones. In conclusion, although the primary diagnosis is appendicitis in patients with right lower quadrant pain, the perforation of the cecum diverticulum during the operation should not be forgotten. When the surgeon plans the surgery, he should not forget this and take precautions for it. The difficulties and complications that may develop during and after surgery can be minimized in this way.

**Keywords:** Cecum perforation, perforation, cecum

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## PP-0731 [Colon and Rectum Surgery]

# Approach with Laparoscopic Anterior Resection: A Rare Case of Lipoma Obstructing Colon

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**Introduction:** Gastrointestinal lipomas originate from the fatty tissue of the intestinal wall. In the gastrointestinal tract, lipomas are frequently localized in the colon, along with the esophagus and small intestine. The causes of obstruction are quite rare. We will present a sigmoid colon lipoma that causes obstruction in this case.

**Case:** Seventy-eight year old female patient applied to our General Surgery outpatient clinic with complaints of intermittent abdominal pain and difficulty to defecate. The patient stated that she had difficulty to defecate for a few weeks and used her finger from the rectum. She had no history of weight loss and bleeding. While there was tenderness in the left quadrant in the physical examination, there was no defense and rebound and the voice of the bowel was hypoactive. Biochemical pathologic findings were not found in blood values and hemogram values were normal. Diffuse gas was observed in the standing direct abdominal graph performed. The patient underwent rectoscopy and it was observed that the color of the lumen became dark (melanosis coli?) and a smooth, mobile mass 4x5 cm in size and the base of which could not be clearly evaluated, and did not permit passage of scopes at 35 cm from the anal canal (polyp ?, lipoma?). Resection was decided in the patient, whose biopsy results was evaluated as lipoma, due to obstruction findings and laparoscopic anterior resection was performed. The patient taken to the postoperative service was discharged on the 4th day postoperatively.

**Conclusion:** Gastrointestinal lipomas are well differentiated and slowly growing mesenchymal tumors originating from the fatty tissue in the intestinal wall. Lipomas more frequently observed in females than males peak in the 5th and 6th decades. Lipomas have submucosa origin in about 90% of cases. Rarely, they can also originate from the subserosal area. Their size is very variable and they may reach a diameter of 20-30 cm in some patients. The most common site where lipomas are observed in the colon is cecum and ascending colon. These are followed by transverse colon, splenic flexure, descending colon, sigmoid colon and rectum respectively. In our case, it was evaluated as a 5 cm lipoma which obstructed the sigmoid colon. While follow-up is sufficient in the ones that are small and asymptomatic, endoscopic segmental resection is recommended for a size of 2cm and laparoscopic segmental resection is recommended if they are larger and cannot be removed. We also preferred laparoscopic anterior resec-

tion because we were not successful endoscopically. Occlusive colon polyps are rare cases and treatment and follow-up should be planned accordingly.

**Keywords:** Sigmoid colon, polyp, laparoscopic anterior resection

## PP-0732 [Colon and Rectum Surgery]

# Laparoscopic Left Partial Nephrectomy Case with Simultaneous Laparoscopic Sigmoidectomy

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**Introduction:** Renal angiomyolipoma is a benign neoplasm originating from mesenchymal elements and was first reported in 1951. Angiomyolipoma is also called 'hamartoma' because of its varying composition including fat tissue, smooth muscle and blood vessels. On the other hand, Jacobs et al. reported the first laparoscopic colectomy at the beginning of the 1990's. Laparoscopic colorectal surgery has some potential advantages when compared to open surgery. In our study we aimed to present the results of simultaneous laparoscopic left hemicolectomy and left partial nephrectomy in the patient with sigmoid colon carcinoma and angiomyolipoma in the left kidney synchronously.

**Case:** A 64-year-old female patient underwent colonoscopy because of fecal occult blood. In colonoscopy, a vegetarian mass causing a narrowing of the colonic lumen 5-6 cm in length 20 cm from the anal canal was seen and a biopsy was obtained from the suspicious lesion. Biopsy pathology was reported as moderately differentiated adenocarcinoma. A computerized tomography for the purpose of staging of the patient showed irregular mucosa-wall thickening- luminal obstruction in the sigmoid colon and a 8.5 cm angiomyolipoma (6 cm in length) originating from the left renal upper pole. MR was applied for the features of the kidney upper pole. Simultaneous laparoscopic sigmoidectomy and left partial nephrectomy were planned in the same session. Ports were placed for classic laparoscopic sigmoidectomy. Medial dissection was completed by attaching A and V mesenterica inferiorly. After the lateral dissection was completed, the splenic corner was lowered. Thus, the left kidney lodge was reached. Urology team was also involved in the operation. Left partial nephrectomy was performed without additional port. Laparoscopic sigmoidectomy was then completed. (Picture). The patient's pathology was moderately differentiated adenocarcinoma (T3N0T0) and angiomyolipoma. The patient was discharged without any complication on postoperative 5th day. No problems were encountered during the first and third month follow-up. Postoperative adjuvant treatment was not considered.

**Conclusion:** Increased use of cross-sectional imaging revealed an increase in incidentally detected angiomyolipomas. Renal angiomyolipomas can cause spontaneous bleeding at a rate of 15% and hemorrhagic shock at about 10%. Preservation of renal function is important in patients with renal angiomyolipoma. Nephron protecting surgery should be considered for this reason. A council was established with general surgery, urology, radiology and medical oncology to plan the operation in the preoperative period because the patient had to undergo mandatory surgery due to sigmoid colon tumor and to be operated in the left retroperitone. The council concluded a simultaneous operation decision. We have not seen such a case in the literature. In conclusion, we believe that simultaneous laparoscopic left hemicolectomy and left partial nephrectomy in cases with sigmoid colon carcinoma and synchronous angiomyolipoma in the left kidney are applicable procedures in centers with laparoscopic surgery experience.

**Keywords:** Laparoscopy, left partial nephrectomy, sigmoidectomy, simultaneous

## PP-0733 [Colon and Rectum Surgery]

# Relationship Between Diverting Ostomy and Anastomotic Stricture in Lower Anterior Resections

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**Objective:** Loop ileostomy or loop colostomy are opened to protect the anastomosis in risky patients undergoing lower anterior resection. Patients wait for some time to close the diverting ostomy. Stenosis in the anastomosis can be observed in control colonoscopies before the ostomy is closed. In this study, rectal anastomosis stenosis rates were investigated in patients with diverting ostomy. It was also investigated whether there is a correlation between the anastomotic stricture and the expected time for ostomy closure.

**Material and Methods:** The information of the patients who had diverting ostomy with lower anterior resection in a single center was retrospectively reviewed. The demographic characteristics of the patients, whether they had received chemoradiotherapy, and the control colonoscopy reports after the index operation were examined. Patients who did not undergo colonoscopy were called by telephone and physical examination and colonoscopy procedures were performed. Anastomotic stricture rates were calculated as the primary outcome. Anastomotic stricture was assessed in cases where it could not be passed from anastomosis with colonoscopy. We investigated whether there was a correlation between the anastomotic stricture and the expected time for ostomy closure as secondary outcome.

**Results:** Sixty one patients underwent diverting ostomy with lower anterior resection between 2009 and 2016. The control colonoscopy reports of 38 patients were reached before the ostomy was closed. The median age of the 38 patients included in the study group were 63 (28-78) and twenty of them (53%) were male patients. All of the patients were treated with rectum tumor. Seven (18%) patients received neoadjuvant, and nine (24%) patients received adjuvant radiotherapy. 22 (58%) patients received adjuvant chemotherapy. Seven (18%) patients underwent laparoscopic resection. 26 (68%) patients had loop ileostomy, and 12 (32%) patients had loop colostomy. Median follow-up time from index operation to control colonoscopy was 12 (3-23) months. Seventeen (45%) patients had anastomotic stenosis in the control colonoscopy. There was no significant correlation between the anastomotic stenosis and the expected time for ostomy closure.

**Conclusion:** Patients who underwent lower anterior resection and deflector ostomy to protect the anastomosis were observed to have a high rate of anastomotic stenosis. No significant correlation was found between the anastomotic stricture and the expected time for ostomy closure. In this study, it has been shown that there is no effect of the time passed till closure of ostomy on anastomotic stenosis rate.

**Keywords:** Lower anterior resection, anastomotic stricture, loop ostomy,

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## PP-0734 [Colon and Rectum Surgery]

# Our Experiences with Hemorrhoidectomy in Our Hospital Which is an Training and Research Hospital

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**Objective:** Hemorrhoidal disease is one of the reasons of admission to surgical clinics of many individuals. Although treatment is usually medical, surgery is considered in cases where treatment is not responsive. In this study, we wanted to share the results of hemorrhoidectomy we performed in our clinic.

**Material and Methods:** We retrospectively reviewed the data of 375 patients who underwent hemorrhoidectomy between January 201 and January 2013 in Department of General Surgery of our hospital. The findings were evaluated in terms of the demographic characteristics, hemorrhoid stage, surgical technique, and postoperative complications.

**Results:** It was detected that the surgical technique (Ferguson, Milligan-Morgan, Band Ligation, Ligasure hemorrhoidectomy), performed in the patients who underwent hemorrhoidectomy and were in the hemorrhoid stages of grade 2-3-4 did not have a difference in the postoperative recovery period of hemorrhoid stage however hemorrhoidectomy performed with Band Liga significantly shortened the duration of surgery compared to other surgical techniques.

**Discussion:** Hemorrhoidectomy is an intervention with successful results in patients with hemorrhoid disease who are still unresponsive to medical treatment. Although the application techniques change, there has been no difference except the change of duration of operation in terms of the results.

**Keywords:** Hemorrhoidectomy, ligasure, band ligation

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## PP-0736 [Colon and Rectum Surgery]

# Renocolic Fistula and Sinistral Portal Hypertension Caused by Xanthogranulomatous Pyelonephritis

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**Introduction:** Fistulas between the GIS tract and the kidney are rare. Nephrocolic fistulas are the most common in nephroenteric fistulas and more than 130 cases have been reported. Xanthogranulomatous pyelonephritis (XGP) is seen as a rare disease; about 400 cases have been reported in the literature up to 1980. Approximately 1/3 of cases of XGP are associated with complications such as abscess and fistula. Here we present a case of renocolic fistula and sinistral portal hypertension caused by XGP.

**Case:** A 50-year-old male patient with complaints of left-side pain, high fever, and fatigue did not have a known chronic disease. Left upper quadrant tenderness was present in physical examination, blood and urine in laboratory tests had high inflammatory values. Stones largest of which was 17 mm and many other smaller ones were observed in left renal pelvis in USG. Left kidney parenchyma thickness increased by 4.8 mm. Splenomegaly in contrast-enhanced CT has completely lost the morphological appearance of the left kidney and was larger than normal and parenchyma became thin. Numerous multiple calculations were observed in the left kidney calyx and left ureter, and these calculi appeared to cause obstruction in the distal of left ureter. Air densities in the left kidney parenchyma were consistent with emphysematous pyelonephritis and the appearance of an abscess forming air-liquid level was noted. Perirenal fatty tissues were eradicated. Percutaneous abscess drainage was performed in the patient, and imaging by giving contrast material from the drain revealed fistulization with the descending colon and contrast material spread to the colon. Left nephrectomy + left hemicolectomy operation was performed by giving a surgical decision to the patient whose inflammatory values did not regress despite drainage. It was observed that the left kidney formed portal hypertension due to splenic vein pressure preoperatively and omentum vessels were dilated secondary to this. The postoperative period was stable. There were varices in the stomach fundus in the gastroscopy performed in the postoperative period. The patient was continued to be followed by outpatient control.

**Conclusion:** Renocolic fistulas are very rare. The ascending and descending colons are the most frequently affected regions. It is most commonly seen in young and middle-aged adults and are seen equally in both genders. Renocolic fistulas can be traumatic or spontaneous. Spontaneous renocolic fistulas arise from primary kidney pathologies. The main treatment of renocolic fistulas is the surgery and it can be followed conservatively only if the fistulas are too small. Nephrectomy and colon resection are usually performed in surgical treatment. The prognosis of the disease depends on the etiology, the duration, the degree of renal failure and the general condition of the patient.

**Keywords:** Nephrocolic fistula, renocolic fistula, xanthogranulomatous pyelonephritis

## PP-0737 [Colon and Rectum Surgery]

# Giant Perianal Papilloma

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**Introduction:** Condyloma accuminata is a common sexually transmitted disease transmitted by the HPV virus. However, as it is symptomatic, giant condyloma accuminata in the perianal region is a rare condition and often confused with SCC (squamous cell carcinoma) in this region. In this case, we will present a 80-year-old case of a giant perianal zone condyloma accuminata.

**Case:** Eighty-year-old male patient was admitted to our General Surgery outpatient clinic with complaints of itching around breech region and a palpable mass. A giant perianal papilloma of approximately 8x8 cm was observed in the perianal region in physical examination. There was a slight inward continuity in RT. Colonoscopy was requested for the patient and it was reported as normal. As a result of the biopsy taken from the mass, the condyloma accuminata was interpreted as HPV type 6. On top of that, local excision and protective colostomy were decided to be opened and the patient and his relatives were informed. The mass was cleaned with clean surgical margins. Protective colostomy was opened. A daily dressing was made for the wound and the patient was discharged and regularly called out to the outpatient clinic. When the wound was closed and full recovery was observed postoperative 2 months later, it was decided to close the colostomy. Loop colostomy was closed. Partial stenosis occurred in the anal canal and the patient was relaxed by dilatation bougie. No recurrence was observed in the patient in postoperative 6th month.

**Conclusion:** Condyloma accuminata is a lesion which can proliferate in the perianal region and turn into SCC. Therefore, it should be closely followed up without neglect and the required treatment must be applied. HPV type 6, 11 have a low risk of malignancy and 16 and 18 have a higher risk of malignancy. In our case result of biopsy was interpreted as HPV type 6. Unfortunately, there is no regular treatment algorithm in these cases in the literature. While immunomodulatory agents (interferon, imiquimod, etc.) can be given, local excision and radical surgery + flap treatment can be selected. Since we did not have any suspicion of malignancy, we chose the local excision but we found it appropriate to open the colostomy due to the trouble of healing of the large defect.

**Keywords:** Papilloma, excision, surgery, giant

## PP-0738 [Colon and Rectum Surgery]

# Place and Importance of Neoadjuvant Therapy in Locally Advanced Stage Rectal Cancer Patients

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**Objective:** Colorectal cancers are the third most common causes of death due to cancer in the world. Rectal cancer has a high risk of local recurrence with difficulty in treatment. In this study, it was aimed to evaluate the effect of neoadjuvant treatment on local recurrence rates and pathology outcomes in patients with locally advanced rectal cancer.

**Material and Methods:** We retrospectively evaluated 99 patients with rectal cancer who were operated in the general surgery department of Selçuk University Medical Faculty Hospital between 2011 and 2018.

**Results:** We had 21 patients who received neoadjuvant treatment for local advanced rectal cancer. The mass did not tend to obstruct the colon in the preoperative colonoscopy of patients in this group. After neoadjuvant therapy, laparoscopic low anterior resection (LAP LAR) was performed in 5 patients; open low anterior resection (LAR) was performed in 4 patients, laparoscopic abdominoperineal resection (LAP APR) was performed in 8 patients and open abdominoperineal resection (APR) was performed in 4 patients. Neoadjuvant pre-treatment CT showed 6 patients with T4 and 15 patients as a T3 tumor. In the pathology reports after surgery following neoadjuvant therapy there was T4 in only 1 patient and T3 in 11 patients, T2 in 7 patients and T0 tumor in 2 patients. In the pathology results, 23.8% of the patients had vascular invasion and 38.6% of the patients had perineural invasion. A total of 240 lymph nodes were removed and 20.8% of them were metastatic. The mean follow-up period of the patients was 15.9 months (2-43). During the follow-up, 2 patients were exitus during oncologic treatment. None of the patients had recurrence in the anastomotic line during the follow-up colonoscopy. Liver metastasis was seen in a patient in radiological imaging. We had 78 patients having advanced rectal cancer and without neoadjuvant treatment. In the preoperative colonoscopy, tumor had tendency to obstruct the tumor colon in 25 patients. LAP LAR was performed in 27 of the patients, open LAR in 27 patients LAP APR in 9 patients and open APR was performed in 7 patients and 8 patients were accepted as inoperable and colostomy was performed. In the preoperative imaging, 1 of the patients was T4; 69 patients were T3. Postoperative pathology results of the patients were also the same. 42.8% of the patients had vascular invasion and 45.7% of the patients had perineural invasion. A total of 1051 lymph nodes were removed and 26% of them were metastasized. The mean follow-up period of the patients was 31 months (1-89). 17 patients in the follow-ups were exitus during oncologic treatment, two patients had recurrence in the anastomosis line in the colonoscopy of the patients. The oncologic treatment of the other patient was continued because he had liver metastasis in the liver and no obstruction findings. Radiologically, 61.4% of the patients had no pathology, distant organ metastases were detected in 38.6% of the patients.

**Conclusion:** The main step in the treatment of patients with rectal cancer is curative surgery. Neoadjuvant therapies can be combined with surgery to reduce the risk of recurrence. It was seen that treatment of neoadjuvant therapy reduced the local recurrence rate from 11% to 5%, whereas unresectable treatment reduced recurrence by 17% when surgery was performed after neoadjuvant therapy. In our study, local recurrence was not seen in the patients undergoing neoadjuvant treatment and it was seen at a rate of 2,8% in the patients not undergoing neoadjuvant treatment. Although the number of patients were limited, our results show that neoadjuvant therapy reduces local recurrence, perineural, vascular invasion, and distant metastasis rates in patients with local advanced rectal cancer. We think that statistical significance will increase if the number of patients is increased.

**Keywords:** Rectal cancer, neoadjuvant treatment, adjuvant treatment, local advanced stage rectal cancer

## PP-0739 [Colon and Rectum Surgery]

# Wrights and Wrongs in the Approach to Colorectal Anastomotic Stenosis: When?, Which Technique?

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**Objective:** One of the most common complications after colorectal surgery is benign anastomotic strictures. It can develop in 5-22% of colorectal anastomoses. If the anastomosis is placed in the lower rectum, treatment with direct digital dilatation, endoscopic balloon or bougie dilatation is possible. Endoscopic balloon dilatation is the best method for all patients with other levels of anastomotic strictures. In our study, we evaluated the success of endoscopic balloon and sponge dilatation techniques we applied on anastomotic strictures developed in colorectal cancer patients.



**Material and Methods:** 167 patients underwent low anterior resection (LAR) + preservative ileostomy in our clinic with rectum tumor diagnosis between July 2014 and December 2017. Nineteen (11.4%) patients who developed anastomotic stricture were included in the study. Demographic findings, stoma duration, dilatation techniques, number and timing of dilatation of the patients were evaluated. Stenoses due to anastomotic leakages have been excluded from the study.

**Results:** Of the 19 patients who underwent LAR in our clinic, 14 (73.6%) of them were male and 5 (26.4%) of them were female. Neoadjuvant chemoradiotherapy was applied to all the patients in our study. The patients were divided into two groups as those undergoing dilatation until postoperative 2nd month groups (Group 1) and the patients undergoing dilatation later than 2nd month (Group 2). In the first group,  $\leq 3$  dilations were needed in 13 patients whereas in the second group  $\geq 3$  dilations were needed in 6 patients. While the time of stoma closure for patients who underwent three and under dilation was 4th month on average, this rate was 7 months for patients who received  $\geq 3$  dilations.

**Conclusion:** Stricture that occurs after colorectal anastomosis is a well known complication but not yet fully defined. There is no complete consensus in the description of anastomotic stricture because it differs in the literature. It is difficult to determine the real rate of stricture formation for colorectal anastomoses since the postoperative follow-up with colonoscopy takes months or years. Male gender and evaluation of anastomosis control after 4 months as independent factors in the development of anastomotic structure were seen as risk factors in our literature review. Some studies have shown that the rate of structure is higher in the anastomoses made with staples than anastomoses made manually. In therapy, dilatation can be applied with finger, bougie (Hegar) and balloon. In this study, we applied bougie and balloon dilatation techniques. It is stated in the literature that postoperative anastomosis evaluation performed after 4th month increases risk of anastomotic stricture. In our study; we tried to show that anastomosis evaluations made up to two months postoperatively would reduce the risk of stricture. However, there is a need for studies involving more patients to support it.

**Keywords:** Colorectal anastomosis, stricture, dilatation

## PP-0740 [Colon and Rectum Surgery]

# Case Report: Perineal Rectosigmoidectomy in the Treatment of Strangulated Rectal Prolapse

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**Introduction:** Full-thickness rectal prolapse is a state of protrusion of rectum wall from the anus with all its layers. Although the exact incidence cannot be predicted clearly, it is usually seen in the elderly population and 80-90% of the cases are females. The pathogenesis of rectal prolapse remains controversial. Full-thickness prolapse may be a sliding defect in the pelvic fascia, or it may occur as a complete progression of internal rectal intussusception to full thickness. The mucosal prolapse may also occur due to the weakness and looseness of the connective tissue ties of the rectum. Although the treatment is surgical, there is no definite consensus on what is the optimal surgical procedure, and many surgical procedures have been defined in this regard. If the surgical technique is roughly classified, it can be classified into two sub-groups as abdominal and perineal procedures. We aimed to present the case of full-thickness rectal prolapse without reduction in this case report.

**Case:** A 42-year-old male patient was admitted to the emergency service with the complaint that anus protruded after a strong strain. Our clinic was consulted with pre-diagnosis of rectal prolapse. It was learned from the patient's history that he had rectal prolapse during defecation that could be reduced with hand and occasional incontinence in his childhood. No abnormal findings were found in the vital signs of the patient. Abdominal examination was comfortable. A rectal prolapse of about 20 cm in diameter which was painful, edematous and non-reducible, was detected in rectal examination. The patient was taken to the operation. He was prepared under the general anesthesia in lithotomy position. Reduction was attempted at the operation table but could not be successful. On top of this, perineal rectosigmoidectomy (altemeier procedure) was decided. A full-thickness incision was made around the prolapsed colon wall under dentat line. The mesorectum and mesosigmoid vessels were then ligated and the meso was separated. The prolapsed rectosigmoid tissue was resected and coloanal anastomosis was performed by one with sutures that could be manually 2/0 absorptive. No protective ostomy procedure was performed in the patient, so oral intake was not initiated until the third postoperative day. Gaita discharge occurred on the fifth postoperative day. There was no problem in the anastomosis of the patient on the 6th day postoperatively, and the patient was discharged. The patient came to the outpatient clinic control 1 week and 1 month after discharge. No complications were encountered in the follow-ups of the patient.

**Conclusion:** Perineal operations in surgical treatment of rectal prolapse are more applicable approaches because of less invasiveness, especially in elderly patients, compared to abdominal surgery. Perineal rectosigmoidectomy was first defined by Mickulicz, but its use was limited due to studies reporting high recurrence rates. Later, thanks to better results published by Altemeier, reuse has increased. Complications were defined at a rate of 10-12% after Altemeier operation. The most common serious complication is the anastomotic leakage. Other complications are pelvic abscess, urogenital dysfunction, and anastomosis stenosis.

In conclusion, perineal rectosigmoidectomy operation is a safely applicable alternative in case of incarcerated rectal prolapse, which is a rare surgical emergency.

**Keywords:** Rectal prolapse, perineal rectosigmoidectomy, strangulated rectal prolapse

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## PP-0741 [Colon and Rectum Surgery]

# Perianal Paget's Disease: Case Report

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Paget's disease is a neoplastic disease primarily seen in the breast. Paget's disease seen in the perianal region is defined as a subgroup of the Extramammary Paget's Disease (EPH). EPH is most commonly seen in the vulva, periscrotal, and perianal regions. We aimed to present the clinical findings, diagnosis and surgical treatment of the rare primary Perianal Paget's disease (PPH) case which was seen in the General Surgery Department of the Health Sciences University İstanbul Training and Research Hospital in December 2017. A seventy-seven-year-old female patient's history included surgery due to hydrocephalus and previous cerebrovascular disease. The patient complained of a red colored, elevated wound in the perianal region for approximately 3 years. Topical treatments were started at the external centers but the complaints were not relieved. As a result of admission of the patient in the dermatology clinic of our hospital, the patient was diagnosed as extramammary Paget disease in the perianal region as a result of the examinations and biopsy. The patient was interned for surgery. MR imaging of the lower abdomen revealed no thickening of the rectum mucosa immediately above the anal canal and upon this finding no feature was detected in the colonoscopy performed. The patient's surgery was performed by a team of general surgery and plastic surgery. The lesion in the perianal region of the patient in prone position, extending to the vulva was excised with a 2 cm intact margin. Then, while the defect in the coccyx region was repaired with transposition flaps prepared from the gluteal region, Ying-Yang flaps prepared from both sides of the defect were sutured into the anal canal mucosa by placing drain into the lodges for anal canal reconstruction. Laparoscopic sigmoid loop colostomy was performed after switching to supine position. Wound infection and wound dehiscence developed on postoperative 7th day when the patient was followed up in the service. The patient was discharged applying serial dressings on the postoperative 39th day. Pathological result of the resected specimen was reported as Minimal Invasive Extramammary Paget's Disease. Perianal Paget's disease (PPH) is a subgroup of EPH that develops within the perianal skin and is examined in two categories according to the tissue it originated from. While primary PPH is caused by apocrine glands in the perianal region or carcinoma of underlying tissues, secondary PPH is associated with malignancy in the distal regions. Secondary PPH is more common and has a worse prognosis. Due to its rare occurrence, it occasionally took its place as case presentations. Although the exact incidence of PPH and the survival rate are unknown, the treatment strategy is not yet standardized.

**Keywords:** Perianal, extramammary, Paget's disease, insitu carcinoma

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## PP-0742 [Colon and Rectum Surgery]

# Transanal Endoscopic Microsurgery (TEM) Application with SILS Port

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Transanal endoscopic microsurgery (TEM) is becoming increasingly common in modern rectal surgery as a good alternative to radical resections of surgical excisions of rectal tumoral structures that can not be excised by colonoscopic methods. Initial work in this area began with G. Buess et al.'s animal experiments in the early 1980s, and the same group published the first patient series in 1985 as "transanal endoscopic microsurgery". The original technique of the transanal approach is the use of a rigid proctoscope with an external diameter of 4 cm, which may lead to severe morbidity, such as decreased anal sphincter pressure and associated incontinence after the procedure. In this study, we share a case in whom we performed TEM as an alternative method through the SILS port. A 66-year-old male patient underwent colonoscopy for the purpose of screening and a polypoid mass with sessile-based mass, measuring approximately 4x3 cm in size with a left lateral wall location starting in the rectum at 6.cm and an endoscopic punch biopsy was reported as an adenoma showing moderate dysplasia. Synchronous lesions were not detected in other segments of the colon. Pelvic magnetic resonance imaging confirmed the absence of wall invasion and peripheral pathologic lymphadenopathy and excision of the lesion with TEM was decided.

**Technique:** One 10 mm and two 5 mm trocars were used over the SILS port placed into anal canal in the left decubitic position under general anesthesia. 10mm and 5mm 30 degree angle optical cameras were prepared. In the presence of conventional laparoscopic instruments and energy devices, the lesion was excised with a circumference of 1 cm intact margin deepening into the circular muscle layer in the base. The mucosa defect was closed endoscopically by suturing. The patient was discharged on the 2nd postoperative day. It was confirmed that adenoma with moderate dysplasia without invasive focus in specimen histopathology and the negativity of all borders were confirmed. There was no pathological finding in the field of resection in the 6 month control rectosigmoidoscopy. Although TEM for rectal adenomas is a recommended method because it offers the advantages of minimally invasive surgery, we think that this procedure can be performed with less traumatic instruments such as the SILS port as well as classical rigid proctoscopy.

**Keywords:** Transanal endoscopic microsurgery, TEM, SILS port, rectal adenoma

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## PP-0743 [Colon and Rectum Surgery]

# Sigmoid Colon Perforation Due to Multiple Myeloma

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**Objective:** Stercoral perforation of the colon is an uncommon and unexplained emergency surgery. Although spontaneous colon perforation due to various causes is defined in the literature, the information about the subject is limited. In this report, we aimed to present spontaneous sigmoid colon perforation in a patient under multiple myeloma treatment.

**Material and Methods:** Characteristics of the case (complaints, history, clinical and laboratory findings, treatment and prognosis): A 64-year-old female patient presented with a complaint of abdominal pain to the emergency service for 1 week. There were ischemic heart disease, congestive heart failure, stenting in coronary arteries, appendectomy, segmental cesarean section, undiagnosed spastic colon, multiple myeloma and associated vertebral metastases under treatment. The patient was on chemotherapy-corticosteroid therapy for multiple myeloma in the hematology-oncology unit. Physical examination of the patient revealed significant tenderness and rebound findings in the lower quadrants of the abdomen. Nausea-vomiting and fever were absent. The patient had spontaneous defecation. Intestinal voices were hypoactive. Laboratory values were Wbc:  $4,67 \cdot 10^3/uL$ , Neu: 53%, CRP: 96 mg/L. In ultrasonography, anechoic free fluid was observed minimally in the subhepatic area in the abdomen and it was more apparent in the right lower quadrant. Computerized tomography revealed free air and dirtiness around the rectosigmoid colon, and appearance consistent with fecalomas in various parts of the colon. The patient was taken into operation with the prediagnosis of hollow organ perforation - acute surgical abdomen. In the operation, intraabdominal purulent fluid, fecalom, located in the rectosigmoid corner of the colon, which corroded and thinned this part of the colon wall, a rectosigmoid colon segment with impaired feeding, and petrified fecalomas in other colonic segments were observed. The patient underwent segmental rectosigmoid colon resection, intracolonic fecaloma emptying and end colostomy. The patient was admitted to the intensive care unit for 1 day postoperatively and was taken to the clinic. Gas-gaita discharge occurred from the colostomy on the postoperative 2nd day and oral intake was initiated and the patient was discharged on the 8th postoperative day with surgical healing. The patient's pathology was reported as colon perforation, serosal peritonitis, edema, mixed type inflammatory cell infiltration.

**Conclusion:** Stercoral column perforation is an emergency surgical condition which is not understood with its various clinical conditions. This case of multiple myeloma-related stercoral perforation is the second case reported in the literature. We believe that dehydration and associated constipation occurred secondary to suppressed immune system due to patient's being under intense chemotherapeutic agents and corticosteroid treatment and plasma with increased viscosity and perforation occurred secondary to intestinal wall ischemia. There is a need for more extensive research to understand the cause of stercoral perforation.

**Keywords:** Multiple myeloma, colon, perforation, sigmoid

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## PP-0744 [Colon and Rectum Surgery]

# Our Acute Appendicitis Cases in Geriatric Age Group

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**Objective:** The purpose of this study is to detect the effect of advanced age on surgical management, postoperative follow-up, and surgical field in patients undergoing appendectomy due to acute abdomen and to discuss the results of our case series.

**Material and Methods:** Sixteen cases who were taken to operation with the prediagnosis of acute abdomen and underwent appendectomy in Bakırköy Dr.Sadi Konuk Training and Research Hospital Department of General Surgery until 01.01.2018. In this retrospective study, demographic data, leukocyte count, alvarado scoring, presence of imaging methods, complication development and duration of hospitalization in the geriatric age group ( $\geq 80$ ) were questioned.

**Results:** Eight male (50%) and eight female (50%) cases underwent surgery. The mean age was 83 (min: 80-max: 96). Patients were admitted with an average of 2.6 day (1-5) abdominal pain complaint. Complaints were accompanied by loss of appetite in all cases. There was no fever in any case. It was reported that in only 1 case the pain changed place and the pain was in all quadrant being more on the right, in all other cases. Leukocytosis was not detected in 6 cases. The mean leukocyte level was measured as 13356/mm<sup>3</sup> (4500-21200). Alvarado score was determined between 5 and 8 in all cases. Ultrasonography was performed in all cases before the operation. In only 3 cases (16%) appendicitis could be detected. Whole abdominal CT scans were performed in all cases whose ultrasonography did not give information. All appendicitis cases were reported in the radiologist's evaluation of the tomography. Laparoscopic appendectomy was performed in 12 cases. The operation was completed by switching to open surgery. Open surgery was started in 1 case. Perforation was detected in 8 cases (50%). Intraabdominal abscess developed in 2 cases (12.5%) postoperatively. It was drained by a percutaneous catheter, which did not require major surgery. The mean hospital stay was detected as 4.3 days (1-12). It was observed that the surgical area was without any problem in the outpatient clinic controls of the patients after their discharge. Malignancy was not found in pathology reports.

**Conclusion:** Although acute appendicitis in the geriatric age group is rare, it should come to mind immediately in cases of newly started pain. Leukocytosis and fever may not be seen in the advanced age group. Cross-sectional methods are recommended to diagnose when ultrasonography is inadequate. Postoperative hospitalization durations are longer than in younger patients with frequently seen appendicitis.

**Keywords:** Appendicitis, geriatrics, laparoscopy

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## PP-0746 [Colon and Rectum Surgery]

# A Rare Cause of Psoas Abscess: Appendicular Mucinous Carcinoma

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**Introduction:** Psoas abscess (PA) is a rare, usually lately diagnosed, disease with a high mortality and morbidity. Psoas muscle has neighbourhood with organs such as appendix, colon etc. Related infections can spread to psoas muscle. Its findings are fever, abdominal pain and low back pain. Psoas abscess is classified as primary and secondary. The etiology of primary psoas abscess (pPA) is unclear. Secondary Psoas abscesses (sPA) constitute 70% of the cases and they occur as a result of local spread from surrounding infected tissues. The choice of appropriate antibiotic in treatment of psoas abscess is open or percutaneous abscess drainage. It was prepared as a case since the pathology result of the appendectomy material due to interpretation of the last imagings of the recurrent right psoas muscle abscess prediagnosis of our patient in favor of psoas muscle abscess secondary to appendix perforation was obtained as appendiceal mucinous carcinoma and that it was not common in the literature.

**Case:** A 84-year-old male patient was admitted to the emergency service in our hospital 3 months ago with the diagnosis of right side pain, nausea, fever, and 8x4 cm abscess at the right psoas level in USG. The patient had diagnoses of diabetes for 14 years and chronic renal failure for 3 years and was using short and long acting insulin, metaprolol and norvasc. Laboratory findings were as such: BUN: 30mg/dL, creatinine: 2.39mg/dl, Na: 142mmol/L, K: 4.49mmol/L, Hemogram: WBC: 12100/ $\mu$ L and urinalysis was normal. A drainage catheter was inserted in the patient by interventional radiology department. Discharge of the patient who was treated with appropriate antibiotic treatment according to reproductions in his culture in the follow-ups was planned due to association of the current picture with diabetes, complete regression of abscess pouch and improvement of current clinical picture after exclusion of other secondary psoas muscle abscess causes including tuberculosis and brucella. The abdominal USG performed in the patient who was hospitalized in our clinic upon recurrence of previous picture after discharge of him 1 month later and was examined again, revealed that appendix formed a wall thickness all along originating from cecum and formed a continuity with the predefined abscess in distal and wall integrity of distal end was impaired. The operation decision of the patient was taken. It was observed that the distal of the appendix was adhered to the psoas muscle after withdrawal of the appendix from cecum. The patient underwent appendectomy and the wall of the abscess cavity was cured. The patient was discharged with healing on the 4th postoperative day. The patient underwent right hemicolectomy upon obtaining the pathology result as appendiceal mucinous carcinoma.

**Conclusion:** Psoas abscess is a rare, infectious disease that is characterized by severe complications with difficulty of treatment, and lethal disease, which do not have typical clinical findings and require advanced imaging techniques for diagnosis. 30% of psoas abscesses are classified as primary and 70% of them are classified as secondary. Crohn's disease takes the first place (60%) in the literature as sPA. It is followed by pott disease, previous intra-abdominal surgeries, kidney stones, brucella, and diabetes.

As an etiology, although the above-mentioned causes are prioritized we are of the opinion that reviewing the conditions of the intraabdominal neighboring organs would help to establish diagnosis. In this respect, it was understood that malignancy was on the ground of pathology of the patient who was operated with the prediagnosis of perforated appendicitis.

**Keywords:** Appendix mucinous carcinoma, perforated appendicitis, psoas abscess

## PP-0747 [Colon and Rectum Surgery]

# Comparison of Postoperative Pain and Recurrence Rates in Open and Closed Lateral Internal Sphincterotomy

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The rise of internal anal sphincter pressure, the anatomic position of external anal sphincter and ischemia are accused in anal fissure formation. Lowering the pressure in the anal canal is targeted in lateral internal sphincterotomy. It was detected that pressure decreased at a rate of 40-50% in patients with high anal canal pressure after lateral internal sphincterotomy, and in parallel anal fissure healing was detected. In this study, postoperative pain levels and postoperative recurrence rates were compared in Open and Closed Lateral Internal Sphincterotomy. Twenty patients were included in the study in both groups formed as prospective and randomized groups. The operation of all the patients was performed with the presence of spinal anesthesia and petidine HCl (aldolan) was administered 1mg for 1 kg intramuscularly in a 6-hour period in the postoperative period. In the postoperative period, both groups of patients were planned to discharge with stopping analgesics at 24 th hour. The peripheral oxygen saturation, respiration rate, heart rate, and non-invasive arterial blood pressures were recorded in our clinic by on duty teams at the 4th, 8th, 12th and 24th hours in the postoperative period. There were no significant differences in terms of age, gender, weight, ASA and duration of operation between the two groups. There was no difference in the anamnesis findings of postoperative pain levels at any working hours. Patients were followed for 9-13 months with intervals of 21 days. In both groups, recurrence was observed in one patient and sphincterotomy was performed again. Although no difference was detected in terms of postoperative pain levels in the first 24 hours in Open and Closed Lateral Internal Sphincterotomy recurrence rates were found to be equal and low. Both methods were found reliable in terms of pain and efficacy.

**Keywords:** Anal fissure, anal spasm, lateral internal sphincterotomy, postoperative pain

## PP-0748 [Colon and Rectum Surgery]

# Laparoscopic Total Colectomy Ileal Pouch Ileoanal Anastomosis Diverting Terminal Loop Ileostomy: Experience Between 2015-2017

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**Objective:** Stapler-assisted total colectomy performed due to ulcerative colitis (UC) and familial polyposis coli (FPC) becomes an applicable surgical method with an increase in laparoscopic equipment and experience. Laparoscopic surgery is superior than open surgery because of less pain after surgery, shorter hospitalization duration, earlier return to work and better cosmetic results.

**Material and Methods:** Patient information, operative information and follow-up information of patients who underwent laparoscopic total colectomy ileal pouch ileoanal anastomosis diverting terminal loop ileostomy in Atatürk University Medical Faculty General Surgery Department between 2015 and 2017 were retrospectively reviewed. Operations were performed by different surgeons using 4 trocars. The veins were closed using a clip.

**Results:** A total of 9 patients underwent laparoscopic total colectomy ileal pouch ileoanal anastomosis diverting terminal loop ileostomy. Four of the patients (44.5%) were female and 5 (55.5%) were male. The mean age of the patients was 38.8 (23-63) years. The operation indications in four patients were ulcerative colitis, while the other five patients were FPC. Operations were performed with 4 trocars in all patients. All patients underwent ileal pouch with the help of stapler and anastomosis was applied with ileoanal stapler. The average duration of the operation was 180 minutes. There was no switch from laparoscopic to open surgery in any of the patients. The colon resection material was removed from the right lower quadrant of the abdomen and loop ileostomy was performed here. None of the patients had any complications during or after the operation.

**Conclusion:** Total colectomy with ileal pouch ileoanal anastomosis diverting terminal loop ileostomy operation can be done safely laparoscopically and takes the place of open surgery either having no incision problems or decreasing hospitalization duration.

**Keywords:** Familial polyposis coli, ulcerative colitis, total colectomy ileoanal pouch

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## PP-0749 [Colon and Rectum Surgery]

# Evaluation of the Factors Related to Recurrence After Total Mesocolic Excision

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**Objective:** Mesocolic excision (MCE) is a standard surgical approach in colon cancer surgery. However, local and locoregional recurrences may occur even after an ideal surgery. In this study, the results of patients who underwent MCE due to colon cancer during 2010-2017 were evaluated.

**Material and Methods:** The results of 100 patients who underwent elective MCE due to colon cancer between 2010 and 2017 were evaluated retrospectively. Factors affecting recurrence were investigated. 5 patients had recurrence (5%). Patients who had recurrence were given in the table. The average follow-up time was 33.67 months.

**Conclusion:** In addition to a standard mesocolic excision in colon cancer surgery, tumor-related factors are also effective in local recurrences. In this study, it was shown that the degree of differentiation was significant in terms of local recurrence. Other possible anticipated factors including perineural invasion, angiolymphatic invasion and mucinous component, which were found to be proportionally high as expected, but not statistically significant, in our study can be explained by the low number of cases in the recurrence group.

**Keywords:** Total mesocolic excision, local recurrence, locoregional recurrence

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## PP-0750 [Colon and Rectum Surgery]

# Hemorrhoidal Disease and Intraepithelial Neoplasia

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**Introduction:** Presentation of the case who underwent excisional hemorrhoidectomy due to Grade III mixed hemorrhoidal disease and in whom high grade anal squamous intraepithelial neoplasia (ASIN) was detected in the histopathological examination.

**Case:** A 40-year-old male patient was admitted to our outpatient clinic with complaints of perianal palpable papillas and itching with anal bleeding for 5 years. A grade III mixed hemorrhoidal disease was detected at 3, 6 and 12 hour direction on the digital examination of the rectum. The patient underwent Ferguson type closed hemorrhoidectomy. In the histopathological examination of the hemorrhoidal tissue specimens of all three quadrants; high grade ASIN was detected at multiple foci in the mucosa. Coilocytic changes have been noted in some places. Surgical borders were reported as clean. The patient was followed up for 3 years. No recurrence was seen.

**Conclusion:** High grade ASIN is classified as premalignant epithelial lesion with low grade ASIN according to World Health Organization 2010 classification of anal canal tumors. ASIN is mostly a pathology incidentally encountered in surgical specimens made for benign diseases. ASIN can occur as eczematous or papillomatous area, or papules or plaques. Induction or ulceration can indicate invasion. Histopathologically, ASIN is characterized by nuclear polarity at varying degrees and stratification loss, increased mitotic activity, nuclear pleomorphism, and hyperchromasia in the epithelium. The surface may or may not be keratinized. There may be coilocytic changes. ASIN is classified as low and high grade. In most studies, HPV infection, HIV seropositivity, low CD4-T cell count, solid organ transplantation, anal sex, and smoking have been identified as risk factors for anal squamous cell carcinoma. Clinical findings may be suspicious in the diagnosis of the disease, but diagnosis is made by pathological examination. Surgical removal with no definite recommended treatment modality may be preferred with low repeatability risk. Regarding our patient; symptoms seen were evaluated as hemorrhoidal disease. We did not identify the sexually transmitted disease history and the clinic. But he had been smoking for over 15 years. A different tissue or lump from the prolapsed hemorrhoid tissue was not seen and not palpable. The patient was

diagnosed with grade III hemorrhoidal disease and Ferguson type closed hemorrhoidectomy was applied to all three quadrants. High grade ASIN was detected in hemorrhoidal tissue specimens from all three quadrants. It was consulted to surgical oncology and medical oncology clinics. The patient with no systemic spread and local invasion was followed up. The patient was followed up for three years. There was no evidence of recurrence or systemic involvement. In haemorrhoidal disease surgeries, it should be considered that there can be significant lesions detected incidentally and all haemorrhoidal tissue specimens should be considered pathologically. A clean surgical margin should be provided in anal precancerous lesions and followed.

**Keywords:** Hemorrhoidal disease, intraepithelial neoplasia, Ferguson method

## PP-0751 [Colon and Rectum Surgery]

# Number of Lymph Nodes and Anatomical Distribution in Colon Cancer Patients

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**Objective:** Regional lymph node metastasis in colon cancers is an important prognostic factor. Different results have been reported in studies on the number and distribution of normal lymph nodes in mesocolon. Our aim is to investigate the number and distribution of lymph nodes according to the anatomical regions of the mesocolon in patients who underwent surgery due to colon cancer in our clinic.

**Material and Methods:** Ten colon cancer patients operated in our clinic with conventional method between August 2017 and February 2018, were taken into the study. Operations and pathologic examinations were performed by a single surgeon and a single pathologist. During surgery, mesocolon vascular structures were connected with high ligation technique and total mesocolic excision was performed. The lymph nodes in the mesocolon after resection were separated by the surgeon according to epiclonic, paracolic, intermediate and main colic lymph node stations and histopathological examination was performed according to these stations.

**Results:** Of the 10 patients who were operated on due to colon cancer, 5 were male and 5 were female and the mean age was 71.6 (51-87 years). Five of the patients underwent right hemicolectomy and five underwent left hemicolectomy. In 10 patients, 258 lymph nodes were examined and the mean number of lymph nodes was 25.8 (7-49). The mean number of lymph nodes in right hemicolectomy patients was 34 (15-49). The mean number of lymph nodes in the epiclonic region was 0.6 (0-1), the mean number of lymph nodes in the paracolic region was 18.5 (8-36), and the mean number of lymph nodes in the intermediate region was 15.2 (7-28). Metastatic lymph node rates were 4.39% (4/91) in the paracolic area, whereas metastatic lymph nodes were not found in other areas. The mean number of lymph nodes in patients who underwent left hemicolectomy was 17.6 (7-31). The mean number of lymph nodes in the epiclonic region was 0.2 (0-1), the mean number of lymph nodes in the paracolic region was 11.8 (3-24), the number of lymph nodes in the intermediate region was 4.8 (4-6), and the number of lymph nodes in the main colic region was 1(0- 2). The rates of metastatic lymph nodes detected were 22% (13/59) in the paracolic area and 4.2% (1/24) in the intermediate area, whereas no metastatic lymph node was found in other areas.

**Conclusion:** The distribution and number of lymph nodes in the colon meso and metastatic lymph node distributions may be important in predicting surgical resection width.

**Keywords:** Total mesocolon excision, colon cancer, lymph node

## PP-0752 [Colon and Rectum Surgery]

# SEMS (Self-Expandable Metal Stent) Applications in the Occluding Colon and Rectum Tumors

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The first application areas of endoscopic stents that can be placed endoscopically were biliary and esophageal obstruction pathologies. Nowadays, they have begun to be used more widely as an alternative method for the palliation of duodenal and

colonic advanced obstructive lesions. In recent years, they are used especially in the left colon and rectum obstructive tumors, for the purpose of bridging the patients to elective surgery. Emergency surgery treatment of colonic obstructive lesions are practices with high morbidity and mortality. Endoscopic colonic stenting in appropriate cases may protect the patient from emergency surgery due to obstruction.

With removal of luminal obstruction by stent;

-Dilation of the dilated colonic loops in the proximity of the obstruction decreases and thus normalizes the intestinal vascular perfusion. So, the probability of necrosis and perforation is reduced

- Impaired fluid and electrolyte balance can be returned to normal in the third cavity due to liquid leakage

-Luminal bacterial translocation is reduced and septic picture control becomes easier

- Decreased distension reduces intra-abdominal pressure and prevents possible abdominal compartment syndrome

- General anesthesia risk is reduced because the patient's vital parameters are improved

- Histopathologic diagnosis of the tumor can be achieved by dissolving the urgency of the patient

- Advanced imaging studies can be used for cancer staging; for example, if a locally advanced rectal cancer is detected, the patient may be given neoadjuvant chemo-radiotherapy

- Surgery can be performed more appropriately with oncologic principles in the resection of distension-resolved colonic loop

-The chance of using laparoscopic and robotic surgery for resection surgeon is increased

- Since proximal and distal colonic lumen diameters will approach each other, the likelihood of providing intestinal continuity with anastomosis increases

- Anastomosis safety is increased by performing surgery on condition that the patient and the surgery are more optimal.

In this report, we share our experience in 4 cases we bridged from emergent surgery to elective surgery by applying SEMS due to the left colon and rectum occlusion lesion. The mean age of the patients were 65.8 (50-84) Occupational tumoral lesions of two male and two female patients were located in the upper rectum, rectosigmoid junction (two patients) and distal sigmoid colon. In the procedures, semi-coated self-expanding colonic stents with external diameters of 25 mm and lengths of 80 and 100 mm were used through colonoscopy lumen under direct view. There was perforation during the procedure in our patient who had a solid tumor with advanced sigmoid location and the patient was operated and the Hartman procedure was applied. Our other 3 patients' surgeries were performed 14, 8 and 11 days later. All three patients underwent low anterior resection with hand-assisted laparoscopic surgery (HALS) under elective surgery conditions. Diverting stoma for anastomosis protection was not applied. One patient was lost for non-surgical reasons. We believe that with this limited case series, SEMS applications may protect the obstructive colonic tumoral lesions at appropriate cases with high morbidity and possible mortality caused by emergency surgery.

**Keywords:** SEMS, spontaneously expanding metallic stent, bridging therapy to surgery, colon and rectum obstructive tumors

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## PP-0753 [Colon and Rectum Surgery]

# The Case of Pseudomyxoma Peritonei Presenting with Port Hernis

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**Introduction:** Pseudomyxoma peritonei (PP) is a rare tumor that occurs at a frequency of approximately one in a million. It is often associated with appendicular mucocele or mucinous overtumor. PP, can be frequently inguinal and rarely presents with hernia. In this article we aimed to present the diagnosis and treatment process of a patient with the diagnosis of PP secondary to mucinous tumor of appendix presenting with laparoscopic port hernia.

**Case:** A 72-year-old male patient with a history of type-2 diabetes, hypertension, and laparoscopic cholecystectomy 10 years ago was admitted to the department of general surgery with abdominal swelling for two months and increased swelling in the area of the old incision scar on the umbilicus. Sensitivity was detected in the right lower quadrant in the physical examination except distension and umbilical protrusion. Laboratory parameters were within normal limits. While a 1.5 cm fascial defect was observed in the umbilicus superior in superficial ultrasonography, computed tomography was reported as a multiloculated cystic mass with a size of approximately 19x13x16 cm, with a mesenteric location at the level of the terminal ileum level and partially herniated at the superior part of the umbilicus. The patient was scheduled for laparotomy with an intraabdominal mass. It was seen that the intraabdominal diffuse gelatinous fluid leading to the protrusion in the



region having port hernia and a mass of 6x5x4 cm in the distal part of the appendix. For example, the frozen examination of the sample sent from the liquid was reported as a liquid having mucinous character considering PP. Right hemicolectomy, ileotransversostomy and peritoneal debridement were performed. Cytoreductive surgery or intraperitoneal hyperthermic chemotherapy were not considered in the patient with poor overall performance. The patient was discharged without any problems on the 6th postoperative day. Pathology result was reported as a mucinous tumor of the appendix. No surgical complication was observed in the 1-month follow-up of the patient. The patient who did not accept additional surgery was referred to the medical oncology unit.

**Conclusion:** In the literature, cases of PP that are rarely presenting with inguinal, femoral, incisional or umbilical hernia have been reported. However, the PP case, which presents with port hernia, has not been defined before. In the case of port hernia, which is a very rare event, the possibility of PP should be kept in mind in case of increased abdominal distension, and whole abdominal imaging should be performed.

**Keywords:** Appendix, mucinous tumor, port hernia, pseudomyxoma peritonei

## PP-0754 [Colon and Rectum Surgery]

# The Role of Diverting Colostomy in the Treatment of Fournier Gangrene

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**Objective:** Fournier's gangrene (FG) is a disease characterized by necrotizing fasciitis developing associated with perineal, genital or synergistic polymicrobial infection of perianal regions. FG has high mortality with insidious clinic, requiring urgent surgical intervention [1]. In fact, it is a disease in conditions of existing low-virulence bacteria and pathological conditions such as local trauma causing destructive and rapid spreading tissue destruction by frequently triggering synergistic effects with comorbid systemic disease. Deaths with FG cause have fallen from 80% to 40% in the last 15 years to below 20% today [2]. Despite surgical debridements, broad spectrum antibiotics, improved wound care products and intensive care facilities, diverting colostomy is still controversially recommended. The purpose of our study is to investigate the place of the diverging colostomy in the treatment of FG.

**Material and Methods:** Thirty three patients who had undergone FG surgery due to only perianal region in the İzmir Katip Çelebi University Atatürk Education and Research Hospital Department of General Surgery between 2014 and 2017 were included in the study. The patients were divided into two groups as the group undergoing diverting colostomy group (Group I, n=17) and the group not undergoing diverting colostomy group (Group II, n=16). Demographic data of the patients, Uludag Fournier Gangrene Severity Score (UFGSI), debridement numbers and postoperative local care (vacuum assisted closure systems-VAC) were retrospectively scanned from prospectively recorded records in the hospital database. All of the study group was assessed within the timeframe until post-operative discharge. Fisher exact test and Mann-Whitney U test were used for statistical study.

**Results:** Five of the patients (21.2%) were female and 26 (78.8%) were male. There was no gender difference in the demographic data of the groups, whereas the patients who had colostomy were found to be statistically younger. It was observed that patients with diverting colostomy had statistically high numbers of UFGSI score and debridement. There was no statistical difference in VAC treatment between groups and mortality.

**Conclusion:** The purpose of the diverting colostomy is to prevent the stool from passing through the infected area for wound healing. However, prolongation of operation period is the cause of morbidity. In our study, colostomy appears to be applied to the patients with worsening physical parameters and wider wounds. Although this group was younger and had a higher number of debridements, there was no difference in local treatment and mortality rates compared to elderly and less debrided patients. In our choice of colostomy, we believe that when considering the general condition of the wound and the patient, they have to be applied less considering that they do not change the number of debridement and mortality and they cause the functional and aesthetic disturbances, and there will be a necessity of secondary surgery.

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**Keywords:** Fournier's gangrene, mortality, colostomy

## PP-0755 [Colon and Rectum Surgery]

# ASA 3 Colon Cancer Patients Operated under Emergency Conditions

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**Objective:** Emergency surgery is required in approximately 15-30% of patients with colon cancer. In this case, there are many treatment options such as ostomy, resection + ostomy or resection + anastomosis. There are studies in the literature suggesting performing only ostomy, and studies suggesting that resection can be done as well. The purpose of our study is to investigate the surgical interventions and outcomes of ASA-3 patients, whose daily activities are not affected due to severe systemic disease in the scoring system by American Society of Anesthesiologists (ASA), requiring emergent intervention due to colocteral cancer.

**Material and Methods:** ASA 3 patients who underwent emergency colon cancer surgery between 2010 and 2017 were included in the study. Patient demographic data, operative indications, operative information, operative time, operative complications and mortality were retrospectively scanned from prospectively kept records in the hospital database. Complications were assessed according to Clavien-Dindo classification. All of the study group was evaluated within the first 30-day time-period. The results were obtained by statistical comparison of the data of the died and living patients. We used the Chi Square exact test for the rXc tables and the t test for the numerical variables as categorical variables in the statistical study.

**Results:** The study was conducted on 133 patients within the specified time period. There was no statistically significant difference in the demographic and surgical indications of the groups. There were no statistically significant differences between the operations performed and the duration of surgery. Anastomosis leakage requiring emergent intervention was observed in two patients who underwent anastomosis after resection in an emergency condition and did not undergo ostomy and mortality was not observed in these patients. There was no statistically significant difference in grade>2 observed surgical complication rate between the two groups according to Clavien-Dindo classification (21.0%, 17.8%, p=0.577).

**Conclusion:** In our study, it was found that the surgical interventions of ASA 3 colon cancer patients under emergency conditions and the related operation time did not make any statistical difference in terms of morbidity and mortality observed in the short term. However, it is known that the long-term outcomes of patients who undergo surgery under urgent conditions are worse than those of elective patients at the same stage. In this case, if possible we believe that it is appropriate to perform the elective surgical intervention. Furthermore, the fact that the proportion of patients who died and lived in our study group is high affects the statistical results, and we believe that the results may change with wider series.

**Keywords:** Colon cancer, emergency surgery, colostomy

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## PP-0756 [Colon and Rectum Surgery]

# An Unusual Cause of Intestinal Obstruction in an Adult Patient: Anal Atresia - Rectovaginal Fistula: Case Report

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**Introduction:** Anorectal malformations are congenital defects observed one in 5,000 live births that define a range of anatomical abnormalities of the rectum and anus. Since it is easy to diagnose, they are usually diagnosed within the first 24 hours after birth and treated surgically in the early period. Nevertheless, there have been reports of untreated cases until adulthood in developing countries. In this presentation, we present a case of anal atresia - rectovaginal fistula who did not receive treatment until an advanced age due to low level of socioeconomic status, and then was admitted to the hospital due to intestinal obstruction.

**Case:** A 32-year-old female patient with no comorbid internal disease presented with complaints of defecation from the vagina from birth and intestinal obstruction following chronic constipation. There was no anal penetration on the patient's examination and a fistula was seen between the rectum and the vagina. In the routine MRI examination of the patient without a pathology laboratory examination, it was observed that the anal canal became a thin band all the way from the localization to the 3 cm proximal from the anal penetration, the luminal structure, internal and external sphincter were not observed and fistula tract associated with vagina in the dentate line region was observed. In computerized tomography, the pelvis was fully padded with 13x29 cm size stool. It was seen that the descending colon and sigmoid colon of the patient who was taken to the operation was completely padded with stool and she was distended. The stools were emptied by performing enterotomy and then a short segment of the colon was resected to prevent development of a motility disorder and the end colostomy was opened from the

descending colon level. The patient whose oral intake started on the postoperative 2nd day was discharged on the 12th postoperative day in order to plan reconstructive surgery.

**Conclusion:** Anal atresia in advanced age is a rare condition; however, treatment may be delayed until old ages if the urethra is fistulized to the uretra, bladder and vagina as in our case. Imperforated anus is a condition that requires emergency surgery unless it is a fistula tract. Perineal anoplasty or colostomy may be applied in surgical treatment. It has been reported in current studies that performing colostomy first for the adult patients and then performing a posterior sagittal anorectoplasty in the second stage is the most effective method. The mentioned prospective reconstructive surgery options in patients with congenital anorectal malformation should be kept in mind.

**Keywords:** Anal atresia, anorectal malformation, intestinal obstruction, perineal anoplasty, rectovaginal fistula

## PP-0757 [Colon and Rectum Surgery]

# Effects of Adipose Tissue Derived Stem Cell Application on Immunosystemically Suppressed Rats with Everolimus on Colon Anastomosis: Experimental Study

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**Objective:** Anastomotic leakage after gastrointestinal surgery causes severe mortality and morbidity. There are many factors that affect the safety of anastomosis. Although MTOR inhibitors have stronger immunosuppression, they have side effects such as wound healing, infertility, pneumonia and thrombocytopenia. Mesenchymal stem cell therapy has a positive effect on wound healing due to differentiation into multiple tissues and increases the formation of new blood vessels.

Investigation of the effect of adipose tissue-derived stem cells on wound healing in immunosuppressed rats with mtOR inhibitors.

**Material and Methods:** In this study, 56 Sprague-Dawless male rats were used and divided into four groups. Group 1 (control, colon anastomosis), group 2 (colonic anastase + stem cell), group 3 (colonic anastomosis + immunosuppression), group 4 (colonic anastomosis + immunosuppression + stem cell). Anastomoses were performed in the descending colon in all groups. The third and fourth groups' immune systems were suppressed with the everolimus every day 7 days before the laparotomy. In the second and fourth groups, subserial adipose tissue stem cell injection was performed in the anastomotic region. One of the subgroups of each group was sacrificed on the fourth day and the others were sacrificed on the seventh day. In each group, adhesion, colonic anastomosis burst pressure, tissue hydroxyproline level measurement, fluorescence microscopy, histopathological and stem cell detection were performed.

**Results:** Adhesion was most commonly seen in group 3 and caused the adhesions of stem cell application to appear less in group 4. On the seventh day, higher levels of tissue hydroxyproline were detected than on the fourth day ( $p < 0.001$ ). Immunosuppression was found to cause a decrease in tissue hydroxyproline level. Stem cell application caused an increase in hydroxyproline level in group 2 ( $p < 0.001$ ), while group 4 did not cause the same effect. On the fourth and seventh day of the anastomosis, the highest bursting pressure was found in the pressure group 2 and in the lowest group 3. Although stem cell administration increased the bursting pressure in group 4 on the fourth day, the same effect was not seen on the seventh day. Histopathological examination revealed high vascular proliferation in the stem cell group ( $p < 0.001$ ).

**Conclusion:** Colonic anastomosis subserosal stem cell injection increases anastomotic resistance and vascular proliferation in immunosuppressed rats with everolimus. Adipose tissue stem cell application may be an appropriate method in risky gastrointestinal anastomosis.

**Keywords:** Immunosuppression, everolimus, anastomosis

## PP-0758 [Colon and Rectum Surgery]

# Mechanical Bowel Obstruction Caused by Intestinal Lymphangiectasia

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**Introduction:** Intestinal lymphangiectasia is a benign disease characterized by focal or diffuse dilatation of the intestinal lymphatic channels (mucosal, submucosal and subserosal). We aimed to present our case of intestinal lymphangiectasis which is a very rare cause of mechanical bowel obstruction.

**Case:** A 64-year-old male patient was admitted to a medical institution with intermittent abdominal pain and constipation complaints. Submucosal lesions were observed in 30 th cm of the sigmoid colon and in the colonoscopy performed in this center. Endoscopic ultrasonography was recommended before the biopsy was taken. On endoscopic ultrasound, the lesion defined in colonoscopy is said to be compatible with submucosal varicosities. There was minimal mild tenderness in the abdomen and no pathological findings except bilateral inguinal hernia in the physical examination of the patient who was admitted to our hospital with the current examinations. Hemogram, blood biochemistry and urinalysis values were normal. An emergency operation was performed due to the inability of defecation and mechanical obstruction findings on the second day of hospitalization for the examination. At exploration, a soft mass that caused intraluminal occlusion was palpated in the excisional sigmoid. Segmental colon resection and anastomosis were performed. Patient without postoperative problem was discharged with healing. The pathology report was reported as colonic intestinal lymphangiectasia. The patient, who was in the 6th month following the operation, did not have any problems during this period.

**Conclusion:** Intestinal lymphangiectasia (IL) is a benign disease characterized by focal or diffuse dilatation of the intestinal lymphatic channels (mucosal, submucosal and subserosal). The number of cases is insufficient to make a sound inference about incidence. The IL-related deductions are not based on more than 200 cases. The incidence of IL among men and women is equal. There are two different clinical types as primary and secondary. Primary form is mostly seen in childhood due to congenital obstruction of lymphatic canals. Primary lymphangiectasia cases occurring at 30-40 years of age have also been reported. Secondary form is related to some clinical conditions such as trauma, intestinal malignancies, pancreatitis and intestinal Behçet's disease. Diarrhea, edema, hypoproteinemia and lymphocytopenia are usually observed clinically. In some patients chylous effusion may also occur due to severe malabsorption. The most common areas are head, neck and axilla. The incidence of all lymphangiectasia in intraabdominal organs was reported as 1.6%. In medical treatment, the removal of the underlying cause and a diet that is poor in oil are recommended. Several cases of surgical resection due to segmental intestinal involvement have also been reported. In our case, the anamnesis, clinical and laboratory findings of the patient were not in conformity with IL in the differential diagnosis. In our case of resection with mechanical bowel obstruction clinic, we encountered a case of lumen obstruction in the colon, which is an extremely rare organ for this disease. Surgery may be selected in lymphangiectasic patients with segmental intestinal involvement to relieve symptoms and to exclude underlying diseases.

**Keywords:** Intestinal lymphangiectasia, colonic lymphangiectasia, mechanical bowel obstruction

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PP-0759 [Colon and Rectum Surgery]

## Rare Endometriosis Localization: Endometriosis in the Perianal Region

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Endometriosis is the placement of endometrial tissue elsewhere except the uterus. Although the most frequent involvement is in the peritoneum, ovaries, douglas, and rectovaginal septum, it may occur in many areas of the body. In this study, we examined the case of endometriosis located in the perianal region. A 26-year-old female patient was admitted by us due to complaints of pain and swelling in perianal region every month. The patient had a history of repeated surgical intervention due to perianal abscess. Upon continuing of the complaints, she was operated by us. No abscess was detected in the operation. The stiffness in the perianal region of the patient was totally excised. Pathology result came as endometriosis. In this case, we aimed to present that endometriosis can be placed in a different region from the usual place of localization.

**Keywords:** Perianal abscess, endometriosis, pain

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PP-0760 [Colon and Rectum Surgery]

## Deloyers Procedure to Facilitate Anastomosis after Synchronous Colon and Rectal Cancer Resection

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**Introduction:** The Deloyers procedure can be used to obtain a good unstressed colorectal anastomosis after extended left colectomy, including inversion around the axis of ileocolic vein of the right colon. In this case, it was aimed to present the patient with synchronous malignancy both in rectum and in colon and to whom we applied right colon transposition.

**Case:** A 79-year-old male patient presented to our outpatient clinic with abdominal pain and rectal bleeding complaints. The patient had masses in colon hepatic flexure level and 10. cm of the rectum in the physical examination, colonoscopy USG, CT and PET CT. Extended left hemicolectomy with low anterior resection, right colon transposition and end to end colorectal anastomosis in the patient whose pathologies were reported as adenocarcinoma. Diverting ileostomy was performed. Patients without complaints were discharged on the 5th postoperative day. The patient was referred to medical oncology.

**Conclusion:** Synchronous tumor in the hepatic edge of the colon and rectum is a rare condition. We think that the right colon transposition procedure described by Deloyers can be safely applied in cases where extended colon resection is needed to involve the rectum and the colon simultaneously as in our case.

**Keywords:** Deloyers procedure, synchronous, colon, rectum, colorectal anastomosis

## PP-0761 [Colon and Rectum Surgery]

**Congenital Intestinal Malrotation Recurrence Right Colon Tumor Case: Case Report****Hikmet Fatih Ağalar<sup>1</sup>, Mirkhalig Javadov<sup>1</sup>, Emrah Karatay<sup>2</sup>, Oktay Karadeniz<sup>3</sup>**<sup>1</sup>*Department of General Surgery, Yeditepe University Hospital, İstanbul, Turkey*<sup>2</sup>*Department of Radiology, Yeditepe University Hospital, İstanbul, Turkey*<sup>3</sup>*Department of General Surgery, Anadolu Health Center, İstanbul, Turkey*

In this case, we present a case operated with the diagnosis of recurrence right colon tumor having congenital intestinal malrotation. A tumor was first detected in the cecum as a result of colonoscopy performed in a patient who presented with anemia and nonspecific abdominal pain two years ago. Contrast-enhanced abdominal tomography of the patient revealed mass and intestinal malrotation in the right colon. The patient underwent open right hemicolectomy operation. Preoperatively, the duodenojejunal component including the duodenum was found to be located to the right of the vertebral column. It was also found that the right column was attached to the right abdominal wall with long bands (Ladd bands), which made it difficult to mobilize. Radiologically and operatively, jejunal and ileal loops were seen on the right side of the median line, and it was detected that Superior Mesenteric artery extended to the middle of the median line, and superior mesenteric venous was observed on the left (SMV rotation finding). Following reporting of the specimen pathology as T3N0, the patient was recommended to follow up with the decision of the oncology council. Appearance consistent with recurrence tumor was detected in the anastomosis line in the control colonoscopy and tomography performed approximately two years later and biopsy was taken from the patient. PET CT was performed in the patient whose biopsy results came as adenocancer with the purpose of of staging. The CEA value was 1.41 and the hemoglobin value was 9.6. The patient was reoperated and recurrent right colon resection was performed. The pathology result was reported as T3N0. Moreover, tumor in the left colon was detected in the daughter of the patient and operated. Upon reporting high-level microsatellite instability (MSI-H) in the additional genetical examination made in the specimen pathology of the patient genetic counselling on the possibility of HNPCC/Lynch syndrome was recommended.

**Keywords:** Intestinal malrotation, recurrent colon tumor, Ladd bands, microsatellite instability

## PP-0762 [Colon and Rectum Surgery]

**Late Complication of Ileal J Pouch: Afferent Loop Obstruction Associated with Long and Expanded Efferent Loop****Direnç Yiğit<sup>1</sup>, Neriman Şengül<sup>1</sup>, Mustafa Hızal<sup>2</sup>, Safiye Güler<sup>2</sup>**<sup>1</sup>*Department of General Surgery and Gastroenterology Surgery, Abant İzzet Baysal University School of Medicine, Bolu, Turkey*<sup>2</sup>*Department of Radiology, Abant İzzet Baysal University School of Medicine, Bolu, Turkey*

**Introduction:** Restorative proctocolectomy has become the standard of treatment method for patients with ileal pouch anal anastomosis, ulcerative colitis and FAP. Complications and management information of ileal pouch surgery is often associated with early period such as pouch leakage, pelvic abscess and pouch fistula. There is not enough information about the pouch configuration and the late complications that may be associated with it. In this study, we presented a case of ileal j pouch 15 years ago due to ulcerative colitis and surgical revision 15 years postoperatively due to efferent pouch syndrome.

**Case:** A 60-year-old male patient presented to our clinic with frequent recurrent abdominal pain and intestinal obstruction attacks. The patient had an ulcerative colitis with dysplasia diagnosed 13 years ago and a restorative proctocolectomy ileal pouch anal anastomosis in his medical history. The patient had persistent abdominal pain, swelling complaints and recurrent small intestinal obstruction, which required hospitalization 3-4 times a year starting from the postoperative 5 years. Colonoscopy was performed due to the complaints of the patient. At the colonoscope, it was determined that the blunt end of J was long and had pouchitis. This was followed by abdominal CT. A pouchogram was applied to the patient on the arrival of "suspicious appearance in terms of rotation in the blunt J pouch in the efferent segment" in abdominal CT. It was also found in the pouchogram that the blunt loop was dilated and long. Laparotomy was planned with the diagnosis of efferent pouch syndrome. Laparotomy revealed diffuse adhesions in the patient. Adhezyolysis was applied and the pouch was explored. It was observed that both afferent and efferent loops were dilated and efferent loop extended from the pelvis to the abdominal cavity. When efferent loop is filled with SF with an colonoscopy, it was observed that it caused pressure on the afferent loop and obstructed it. The efferent loop was excised through the pouch penetration. The complaints of the patient regressed in his postoperative follow-up. He tolerated oral intake well and was discharged on the 6th day. There was no obstruction symptom of the patient evaluated in control.

**Conclusion:** It is important how to design the pouch in long-term mechanical complications and surgical may be needed for functional improvement.

**Keywords:** Ileal pouch, complication, efferent pouch syndrome, ulcerative colitis

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## PP-0763 [Colon and Rectum Surgery]

# Synchronous Colon Tumor with Complete Mechanical Bowel Obstruction: Presentation of Two Patients

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**Introduction:** Secondary tumors detected within 6 months of primary tumor diagnosis are called synchronous tumors. The rate of detection of synchronous polyp in cases in whom colorectal adenomatous polyp has been detected to vary between 30 and 50% in the literature. In a case of colorectal cancer diagnosis, the rate of detection of a second tumor focus is 3.5%. We aimed to present two cases diagnosed with intraoperative synchronous colon tumor after 15 days of urgent application due to complete mechanical bowel obstruction.

**Case 1:** A 57-year-old male patient was admitted to the external center with a history of appetite reduction, nausea, irregularity in defecation for about 2 months. In the colonoscopy performed at the external center, a biopsy specimen with a mass that does not allow the passage of colonoscopy at the level of splenic flexure is taken and it is suggested to follow the pathology result. Ten days after the examination, the patient was admitted with diffuse abdominal pain and he was operated upon detecting acute abdomen findings. During exploration, two masses which obstructed the lumen completely were seen proximal to the transverse colon and proximal to the sigmoid colon, and subtotal colectomy + ileocolonic anastomosis were performed. The case was discharged on the 8th day postoperatively. In his histopathology, lymph node metastases in T4a and 34 were detected in both tumors.

**Case 2:** A 66-year-old male patient was admitted to the external center with complaints of diffuse abdominal pain, nausea and vomiting that lasted approximately 10 days. After the admission, he was referred to us. The patient was emergently operated with acute abdomen findings. Expanded left hemicolectomy + colorectal anastomosis and protective loop ileostomy were applied to the patient in whom two tumors that obstructed the lumen completely in sigmoid colon and splenic flexura were detected intraoperatively. The case was discharged with healing on the 9th day postoperatively. Histopathology was reported as tumor T3 other T4a and 26 reactive lymph nodes.

**Conclusion:** Patients with colorectal cancer may admit to the emergency service with complete or incomplete obstructions. The patient should be thoroughly examined intraoperatively for the entire tumor, keeping in mind that there may always be a second tumor focus in the patients with ileus operated under emergency conditions. In addition, the cases should be assessed by intraoperative colonoscopy in cases where the tumor is detected in the colonoscopy but the proximal part of the tumor cannot be reached. The operation to be performed according to the location of synchronized tumor placement should be decided and applied. Colonoscopy should be planned at the earliest postoperative period in cases of this type of urgent surgery and intraoperative colonoscopy cannot be performed.

**Keywords:** Acute abdomen, colon cancer, synchronic

## PP-0764 [Colon and Rectum Surgery]

**Bilateral Breast Metastasis of Rectum Mucinous Carcinoma (Rare Case)****Emine Özlem Gür, Coşkun Onak, Turan Acar, İbrahim Kokulu, Selda Hacıyanlı, Osman Nuri Dilek***Department of General Surgery, İzmir Katip Çelebi University, School of Medicine, Atatürk Training and Research Hospital, İzmir, Turkey*

**Introduction:** Metastatic breast carcinoma without primary breast cancer is a rare clinical condition. Lymphoma, metastatic melanoma, and bronchial carcinoma are the malignancies that make up the majority of breast metastases. Rectal carcinoma of the breast metastasis is rare, bilateral breast metastasis is a very rare clinicopathologic condition. Here, we present a 47 year-old male patient who underwent low anterior resection for rectal mucinous adenocarcinoma and in whom bilateral breast metastasis was detected after 2 years.

**Case:** A 47-year-old male case was evaluated 2 months ago for massive complaints in both mammals.

In his medical history, the patient underwent low anterior resection and conservative loop ileostomy due to rectum mucinous adenocarcinoma in another center 2 years ago and the pathology result was reported as pathologic mucinous adenocarcinoma and 10 of 22 lymph nodes were reported as metastatic (pT4N2). Adjuvant radiotherapy and chemotherapy were applied. In the examinations performed in our hospital, bilateral breast ultrasonography revealed a highly suspicious solid mass with echogenicity due to desmoplastic reaction in irregularly bordered circumferential fat plans protruding from the skin at the direction of twelve o'clock in the right breast with high suspicion of malignancy. In the upper external lobe of the left breast, a mass having more regular border than the mass in the right breast, including echogenicity due to desmoplastic reaction, protruding 19x9 mm from the skin and having a suspected inhomogeneous malignancy was detected. Radiopathologic lymph nodes were not detected in both axillas. The carcinoembryonic antigen (CEA), CA15-3 and CA19-9 values were normal, and the new lesion with a size of 15x10 mm and SUV max 3.2 in the right breast cutaneous tissue was interpreted as metastasis in the positron emission tomography (PET CT) performed. Mucinous carcinoma metastasis was reported in the patient's true-cut breast biopsy. No metastasis was seen other than in the breast of the patient and the condition of the patient was handled in the tumor council and mass excision from the bilateral breast was performed.

**Conclusion:** Very few cases of rectum mucinous adenocarcinoma with bilateral breast metastasis have been reported in the literature, but it should be considered that breast metastasis may be present in patients previously operated due to rectal ca.

**Keywords:** Rectal carcinoma, breast, metastasis

## PP-0765 [Colon and Rectum Surgery]

**Repair with Bulbocavernous Flap Surgery in Recurrent Rectovaginal Fistula****Eyüp Murat Yılmaz, Erkan Karacan, Ahmet Ender Demirkıran***Department of General Surgery, Adnan Menderes University School of Medicine, Aydın, Turkey*

**Introduction:** Recto-vaginal fistula (RVF) is a disease with an abnormal epithelial connection between the anterior wall of the rectum and the posterior wall of the vagina and causing high social trouble for the patient (1). The most common symptoms are vaginal discharge, dispareunia, and vaginal discharge of gas/stool (2). Treatment is difficult and often recurrences are encountered. Surgical treatments include local repair methods (transanal, vaginal, perineal), various tissue transposition methods, and transabdominal repairs. We planned to present our case of rectovaginal fistula that had recurred 2 times with repair of bulbocavernosal fistula.

**Case:** A 48-year-old female patient was admitted to General Surgery outpatient clinic with vaginal discharge of gaita. There was no other trauma and radiotherapy, no malignancy history in the patient who had transvaginal delivery and episiotomy three times before. The patient underwent primary repair for the same fistula by the department of gynecology and obstetrics 2 years ago, and by general surgery 1 year ago, and the first one recurred in the postoperative first year and the second recurred on the postoperative 1st day. A bulbocavernous fistula and a protective loop colostomy were planned and written informed consent was obtained from the patient. The operation was done. The patient was discharged on the postoperative 2nd day. Loop colostomy of the patient whose postoperative 2nd month rectoscopy and vaginal examination were normal and who had no complaints was closed with normal rectoscopy and vaginal examination and no complaints was closed. The patient is in the postoperative 6th month and has no complaints.

**Conclusion:** While obstetric causes have the first place in RVF etiology in developing countries, surgical interventions due to gynecological malignancies and fistulas secondary to radiotherapy are mostly seen in Western countries (3,4). Primary repair,

myocutaneous fistula, and bulbocavernosal fistula can be tried in the patient (1) Primer repairs recurrence rate is quite high. We also observed recurrence with primary repair in our patient 2 times. Pre-operative vaginal and colon preparation and preservative stoma opening are the factors that increase the success of the operation.

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**Keywords:** Rectovaginal fistula, bulbocavernosal flap, recurrence

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## PP-0766 [Colon and Rectum Surgery]

# Our Results of Screening Colonoscopy in the Patients with Faecal Occult Blood

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**Objective:** Colon cancer screening program in our country is applied to healthy individuals between the ages of 50-70 from September 2014 as a faecal occult blood (FOB) test every 2 years and colonoscopy every 10 years. We aimed to present the colonoscopy results of 110 consecutive FOB (+) patients who were referred to our clinic as part of the screening program.

**Material and Methods:** We included 100 consecutive patients who were diagnosed with FOB positivity in the health care centers and who were referred to our clinic for further investigation in the last year, and their colonoscopy findings, diagnostic information and demographic characteristics were examined.

**Results:** Sixty (54.5%) of our patients were female and 50 (45.5%) were male. The mean age of our patients was 56 (50-70). In two of our patients (1.8%), large ulcerovegetan masses were observed, one in the descending colon and the other in the rectum, and biopsy results were reported as adenocarcinoma. Polyps were detected in 45 (41%) of our patients, 29 patients (26.3%) had normal colonoscopic findings, 16 (14%) patients had benign anorectal diseases (fissure, hemorrhoids) and 10 (9%) patients had diverticular disease. Three (2.7%) patients were diagnosed with ulcerative and 5 patients (4.5%) had nonspecific colitis in pathology diagnosis.

**Conclusion:** In addition to a decrease of mortality and morbidity, early treatment of colorectal cancer, will also decrease treatment costs. The way to diagnose colorectal cancer early is to catch the disease with asymptomatic screening programs. Two patients who were diagnosed with FOB (+) by screening program and had no gastrointestinal complaints were caught as colon ca at asymptomatic stage and underwent early surgery. Ten patients underwent polypectomy with precancerous adenomatous polyps and the patients were followed up colonoscopically. We are of the opinion that mortality and morbidity of colorectal cancer would be decreased by spreading screening programs, and their effective application.

**Keywords:** Colon cancer screening program, efficacy, outcomes

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## PP-0767 [Colon and Rectum Surgery]

# Should a Seton Be Applied in Anal Abscess Drainage?

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**Objective:** In this study, it was aimed to compare the patients who underwent drainage due to anal abscess and patients with simultaneous drainage and seton administration in terms of quality of life, recurrent abscess and fistula development.

**Material and Methods:** A total of 45 patients, 34 male and 11 female, with anal abdominal diagnosis were treated retrospectively in the outpatient clinic and emergency service between 2015 and 2017. Demographic characteristics of the



patients were recorded. The results of the applied surgical procedures were provided by scanning the computer records and inviting the patients to the control examinations. The quality of life was assessed as good (no discharge, no pain, no fever), moderate (discharge is present, no pain-fever) and poor (pain, fever, discharge are present and re-directed and / or spontaneous drainage). Abscess drainage was achieved by fenestrating under local or general anesthesia. Patients were grouped into patients with simple drainage (Group I, n=30) and patients in whom seton was applied by demonstrating the relationship between pouch and rectum (group II, n=15). The follow up time was 6-22 months (median 13) in group I and 4-24 months (median 15) in group II.

**Results:** There was no difference between the groups in terms of age, sex, and median follow-up.

Of the 30 patients in Group I, 16 (53.3%) were found to have a good quality of life, discharge continued in 11 (36.6%) of the patients, and 3 (10%) patients were re-drained due to having an abscess. Of the 26 patients who came to the control examinations, 12 (40%) were found to have no complaints after drainage and 11 (42.3%) patients had definitive surgical intervention with drainage after fistula. 11 patients (73.3%) had a good quality of life in the group of 15 patients who came to control in Group II. Three patients who lived with seton and did not accept the operation were followed up with minimal discharge. It was observed that recurrent abscesses occurred in one patient with rupture of seton and the quality of life was "bad". The setons of 7 (46.6%) patients changed into cutting seton after an average of 6 weeks after the operation, and 4 (26.6%) patients had definitive surgical intervention. There was no recurrence.

**Conclusion:** In the series presented, the quality of life was good in 40% in group I and 73.3% in Group II. Abscess recurrence in group I was 23.3% while it was 6.6% in group II. The need for definitive surgery was 36% in Group I, and 26% in Group II. We think that the application of seton in abscess drainage in addition to fenestration prevents the development of recurrent abscesses, reduces the need for definitive surgery and increases the quality of life.

**Keywords:** Anal abscess, seton application, anal fistula

## PP-0768 [Colon and Rectum Surgery]

# Comparison of Quality of Life Scores for Patients Who Underwent Low Anterior Resection and Abdominoperineal Resection Due to Rectum Tumor

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**Objective:** Colorectal carcinomas are the third most common malignancy among all cancers and the most common malignancies among gastrointestinal system cancers. In this study, it was aimed to compare the quality of life in patients who underwent radical surgery due to rectum tumor.

**Material and Methods:** The patients who underwent low anterior resection (LAR) or abdominoperineal resection (APR) due to rectum cancer at Akdeniz University Medical Faculty Hospital between May 2009 and December 2015, were compared with Short Form-36 (SF-36) quality of life scores.

**Results:** Patients who underwent APR were found to be statistically significantly better than patients with LAR, on physical function (PF), physical role strength (PRS), emotional role strength (ERS), energy / liveliness / vitality (ELV), mental health (MH), social functioning (SF), general health perception (GHP) and, there was no significant difference between patients with LAR and patients with APR for pain (P) scores. It was observed that there was no statistically significant difference between the patients undergoing LAR and APR in the evaluation of only patients not having any complication development in terms of PF, PRS, ERS, ELV, P, and GHP and it was also seen that the patients who underwent LAR were statistically significantly in better condition in the parameters of MH and SF.

**Conclusion:** Although there is no difference in oncologic outcomes between APR and LAR patients, complication development is important in the quality of life evaluations. If there is not a development of complication, life quality of the patients undergoing LAR is quite good, however life quality becomes worse than the patients for whom permanent stoma is opened in case of complication development. Taking into consideration these results, it is considered that if there is a high risk in terms of compli-

cations such as anastomotic stricture and anastomotic leakage, resection technique selection can be in favor of APR rather than restorative procedures.

**Keywords:** Rectum tumor, low anterior resection, abdominoperineal resection, quality of life score

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## PP-0769 [Colon and Rectum Surgery]

# Our Clinical Experience in Transanal Endoscopic Microsurgery

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**Objective:** Transanal Endoscopic Microsurgery (TEM) is a method of treatment for rectal polyps and in cases where colonoscopic resection is unsuitable for lesions. We aimed to share the results of the cases who underwent TEM in our clinic between 2015 and 2017 and video presentation of a patient who underwent TEM.

**Video Content:** Patients who underwent TEM in our clinic between 2015 and 2017 were included in the series. Patients were selected according to the criteria of good and moderate differentiation of the lesion, lesion's not closing the 1/3 of the lumen, not being larger than 8 cm in the benign lesion and 3cm in the malignant lesions, no lymphovascular and perineural invasion, and being T1 lesion. In selected patients, the lesions were up to 15 cm in the rectum, and located in the upper rectum in 2 patients, in the middle rectum in 4 patients and in the lower rectum in 11 patients. Patients were operated with angled laparoscopic instruments using the TEM method being as a macroscopically clean surgical margin of 3 mm circumference and 10 mm perirectal fat plane. After the dissection of specimen the mucosa was sutured and closed.

**Conclusion:** Of the 17 operated patients 11 of them were male and 6 of them were female. There were adenomatous polyp in 8 patients, hyperplastic polyp in 2 patients and fibroepithelial polyp in 1 patient. There was a solitary rectal ulcer in one patient. Four patients had grade 1, T1, adenocarcinoma without lymphovascular and perineural invasion. No recurrence was detected in all patients' follow-ups. There was no complication after surgery and the patient was discharged by healing the day after. TEM is a minimally invasive procedure and has very good results in selected patients in terms of hospital stay and patient comfort. We believe that the long-term outcomes are not yet sufficient and that this is a current method that we think will lead to wider series and longer follow-up periods in this issue and to increase patient comfort and reduce morbidity in future clinical applications.

**Keywords:** TEM, transanal microsurgery, minimally invasive, endoscopic

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## PP-0770 [Colon and Rectum Surgery]

# On the Track of Inguinal Channel: Case Report of Sigmoid Diverticulum Fistula with Left Lower Quadrant Necrotizing Fasciitis Presentation

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A 75-year-old female patient was admitted to the emergency service with a complaint of hyperemia and ecchymosis in the left lower quadrant. It was observed in the examination that the patient had sensitivity on the skin accompanied by crepitation and bullae in the inguinal region in the left lower abdominal quadrant, but abdominal tenderness and defense and rebound were not present in the patient. The patient who was thought to have an atypical localization in terms of necrotizing fasciitis was found to have no pathology in the intraabdominal organs in the CT performed, but there were findings consistent with necrotizing fasciitis in the left inguinal region of the skin. The patient was operated for debridement. Following the incision, the abdomen was explored upon discharging of fecal content. It was observed in the case in whom the intraperitoneal area was found to be totally clear at exploration that the sigmoid colon was adhered to the inguinal canal and fistulization developed to the skin through the inguinal canal. When the dissection was deepened, we noticed that fistulization was mediated by inguinal blood. Fistulization of the sigmoid colon diverticula, especially of the bladder and other abdominal organs, may occur. However, we have not found any inguinal channel mediated fistulization in the literature. Because of the form of presentation and the difficulty in defining the case in CT, we think that the left inguinal cellulitis or necrotizing fasciitis should be kept in mind.

**Keywords:** Sigmoid fistula, necrotizing fasciitis, inguinal channel

## PP-0771 [Colon and Rectum Surgery]

## Rare Mixed Adenoneuroendocrine Carcinoma of the Cecum: A Case Report

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**Objective:** The description of exocrine-neuroendocrine tumors of the gastrointestinal system was first published by Cardier in 1924. These tumors are thought to originate from multipotent stem cells. According to the recent World Health Organization (WHO) classification, neoplasms that are exocrine and neuroendocrine components are called "Mixed adenoneuroendocrine carcinomas" (MANEC). Less than 10 cysts of microscopic tumor were reported in the English literature. Most of the cases were described after liver metastases. We present a rare tumor of the MANEC tumor that caused the appendicitis picture for the first time in our study.

**Material and Methods:** A 64-year-old female patient was admitted to our emergency department with nausea, vomiting and abdominal pain in the lower right quadrant. The pre-diagnosis of acute appendicitis was established and the laparotomic exploration decision was made. A mass obstructing appendix root was detected in the operation.

**Results:** The adult patient presented with complaints of pain, nausea and vomiting on the lower right side of the abdomen since 3 days. The patient did not have a chronic illness and there was no regular use of medication in her history. No family history of gastrointestinal cancer was found in the first degree relatives. There was sensitivity only in the lower right quadrant in the examination. The examination of the other systems was evaluated as normal. The patient's laboratory values were WBC: 9900 K / u (4X10<sup>3</sup>-10x10<sup>3</sup>), CRP: 3.95mg / dL (<0.5). Computerized tomography (CT) showed a 28x24 mm contrast enhancement in the cecum and a large and inflamed appendix due to the pressure of the cyst. Appendectomy and cecum wedge resection were performed for the patient. The pathology report was reported as poorly differentiated adenocarcinoma. For this reason, the patient was followed up and she underwent right hemicolectomy one month later and pathology was reported as mixed adenoneuroendocrine carcinoma.

**Conclusion:** Neuroendocrine neoplasias (NENs) arise from endodermal cells. These cells have common characteristics, such as the production of biogenic amines and polypeptide hormones. Sometimes NEN contains malignant exocrine glandular cells, when it represents at least 30%, it is called MANEC. These tumors are characterized by nonspecific symptoms, usually occurring in the fifth or sixth decade of life. MANEC is a malignant tumor prone to distant metastases. Therefore, it is usually diagnosed late and at the metastatic stage. If the diagnosis is made at an early stage, surgical resection may be therapeutic.

**Keywords:** Appendicitis, cecum, mixed adenoneuroendocrine carcinoma

## PP-0772 [Colon and Rectum Surgery]

## Total Removal of the Mesh due to Mesh Erosion in a Rectocele Case who Underwent Transperineal Repair with Polytetrafluoroethylene (ePTFE) Mesh

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The erosion of mesh which is a complication of repairs with mesh in the pelvic organ prolapses is a feared condition among surgeons especially due to medicolegal problems it creates. This causes different mesh types to be used during repairs. Some of the existing meshes have severe fibrosis, high-grade erosions and low recurrence rate, whereas some cause complications such as poor fibrosis, high recurrence and mesh rejection. The video demonstrates the operation of extracting the mesh due to mesh rejection in the rectocele case, in whom transperineal mesh repair was conducted with polytetrafluoroethylene (ePTFE) mesh. Video: In the operation performed in the lithotomy position under full intestinal cleansing and spinal anesthesia, 2/3 of the mesh was found to be rejected but there was not a finding in favor of the infection. In order to remove the rest of the mesh, the rectovaginal septum was dissected and mesh was extracted totally by opening weak adhesions with gentle blunt dissections. The rectum was controlled by rectal touché and flexible rectosigmoidoscopy. Finally, rectum was controlled in terms of rectovaginal fistula having a size that could escape from the eye in rectal touche and flexible rectosigmoidoscopy by filling with methylene blue. After the control, no pathology was found in the patient and the lodge was abundantly washed with serumphysiological. The perineum and vagina were closed with 3/0 vicryl sutures.

It may be necessary to use mesh in the repair of pelvic organ prolapse. In such a case, the choice of mesh and the way in which the selected mesh will be used has critical importance.

**Keywords:** Rectocele, pelvic organ prolapse, mesh erosion

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## PP-0773 [Colon and Rectum Surgery]

# A Rare Case: Perianal Involvement in Lymphoma

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**Introduction:** Lymphomas are malign diseases that originate from lymphoreticular cells. They are divided into 2 groups as Hodgkin's lymphoma and non-Hodgkin's lymphoma. Lymphoreticular cells are found especially in the lymph nodes, so the tumor growth of the lymph nodes is often the leading clinical symptom but the symptoms may vary according to the locations where they are seen. Lymphoma is a disease that must be included in the differential diagnosis of perianal lesions. In this study, it is aimed to present a case of a lymphoma which is interned with the pre-diagnosis of perianal abscess.

**Case:** A 55-year-old non-comorbid female patient was admitted to the emergency room with a complaint of pain in anus in the last week. During the patient's admission, physical examination revealed swelling in the perianal region and the patient was operated with the pre-diagnosis of perianal abscess. Drainage could not be achieved because the abscess pouch could not be reached. The patient underwent colonoscopy in her follow-ups. Colonoscopy revealed a mass lesion involving edematous necrotic areas and a segment of approximately 3-4 cm, narrowing the lumen all around at 3 cm in the rectum. Patient underwent lower abdominal CT and lower abdominal MR. The pelvic mass was first identified as a hematologic tumor image. The patient underwent reoperation after the ileus picture developed in her follow-ups. The patient's operation showed an unresectable mass completely filling the pelvis. Pathology material was taken from this mass and loop colostomy was opened. The patient complained of swelling on the cheeks in his follow-ups and paranasal sinus and maxillofacial CT were applied and neck and facial MR was performed. A biopsy was taken by the department of otorhinolaryngology on the basis of a mass image extending from the patient's right maxillary to the mandibula. Upon reporting of pathologic examination result as high grade large B-cell lymphoma showing plasma cell differentiation, chemotherapy was started for the patient by the department of hematology. The patient with cardiopulmonary arrest was lost on the second day of chemotherapy.

**Conclusion:** Perianal abscess is a disease that is thought to be originated from cryptoglandular epithelium in the anal canal and can be seen in ischiorectal, supralelevatoric, transsphincteric and intersphincteric cavities. Although perianal abscess is considered in the first plan in the lesions presenting with hyperemia, temperature increase and fullness developing in the perianal region, in case features such as lymphadenomegaly, B symptoms and deterioration in hematological laboratory parameters are detected lymphomas with perianal involvement should be kept in mind.

**Keywords:** Lymphoma, perianal, abscess

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## PP-0774 [Colon and Rectum Surgery]

# A Rare Fistula Localization after Rectum Surgery: Lower Extremity Fistulas

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**Introduction:** Common complications following colorectal surgery are incision site infection, abscess, fecal fistula, anastomotic leaks, pyoflebitis and ileus. Fistulas are usually located at drainage sites and incision line, although fistulas that extend to the lower extremity are unlikely to develop, they exist. In our study, we wanted to present the clinic of rare lower extremity fistulas after rectal surgery and our surgical experiences.

**Case 1:** A 32-year-old male patient was urgently explored after a preponderant fire gunshot wound in the abdomen in the external center. Anterior resection and colorectal anastomosis were performed. The patient was referred to us with intraabdominal abscess and septic clinical picture on postoperative day 17. There was tenderness in the left lower quadrant of the abdomen in the examination. There was oedema, temperature increase in the left thigh and crepitation in the subcutaneous tissue. There was leukocytosis and crp elevation in the examinations performed. In the urgent pelvic tomography of the abdomen, it was seen that he had fistula from the anastomosis line to the lower left extremity. It was urgently excised. Hartman colostomy was opened and debridement was performed to the left lower extremity with orthopedic consultation. The patient was discharged after repeated debridements and antibiotherapy for an appropriate period of time.

**Case 2-3:** 63 and 57 years old male patients underwent low anterior resection and colorectal anastomosis operation after completing neoadjuvant treatment due to rectal cancer. Two patients were discharged with healing on the 7th postoperative day. They were admitted to the emergency service on the postoperative 3rd week with leukocytosis,, crp increase and case-2 right, and case-3 left-lower extremity Fournier gangrene findings. Rectogluteal fistula was detected in the imagings performed. Hartman colostomy was opened and the operation of left hip disarticulation operation was performed in the patients taken to the operation urgently and preoperative orthopedics consultation was requested from them. Patients were discharged with healing after the follow-up for appropriate period and antibiotherapy.

**Case 4:** A 57-year-old male patient had a history of radical cystectomy due to bladder cancer and urinary diversion with the method of loop. During this operation, he was consulted to us preoperatively due to iatrogenic rectum injury and primary rectum repair was performed in the patient by us. The patient was discharged upon absence of content from the drain and defecation and by removing the drain on the postoperative 7th day. He was admitted to the emergency service with signs of fever, left lower extremity pain, temperature elevation and subcutaneous crepitation on postoperative 17th day. In addition to local examination findings, leukocytosis and CRP elevation were present in patients with systemic septic findings. Rectogluteal fistula was detected on the MR image of the lower abdomen. Debridement of the left lower extremity and VAC application operation and perioperative orthopedic consultation were performed with the opening of the Hartman colostomy in the patient who was taken to the emergency operation. The patient was discharged with healing after serial debridements and antibiotherapy.

**Conclusion:** Frequent complications following colorectal surgery including fecal fistulas, draining sites and incision line can be diagnosed easily. Rectogluteal fistulas should be kept in mind in case of presence of infective clinical findings such as subcutaneous crepitation, temperature elevation and edema in the lower extremity and findings of Fournier gangrene in the patients with colon and rectum surgery histories and immediate surgical treatment should be provided after appropriate imaging.

**Keywords:** Lower extremity, surgery, fistula, colorectal

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## PP-0776 [Colon and Rectum Surgery]

# Gluteal Dermoid Cyst

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**Introduction:** To share our experience in excisional surgery of the dermoid cyst adjacent to the anal canal and external anal sphincter in the gluteal region

**Case:** A mass of about 10 cm in the right gluteal region was detected in 32-year-old female patient with pain and swelling complaints in the hip, and the pelvic MR revealed a well-circumscribed mass that can be a cyst with dense content having 100x80 mm size, adjacent to the external anal sphincter and anal canal in muscle tissue in right gluteal area. In the rectal examination, the compression effect could be felt in the neighborhood of the anal canal. Laboratory parameters and tumor markers (CEA, CA 19-9, alpha fetoprotein) were within normal limits. In the Jackknife position, a vertical incision was made parallel to the intergluteal sulcus in the right gluteal region. After passing the skin and subcutaneous tissues the cystic mass was observed to be approximately 10x10 cm in size, adjacent to the anal canal and extending from the medial to the anal sphincter of the gluteus maximus muscle and intact borders were also excised.

**Conclusion:** Dermoid cysts, formed of germs also called mature cystic teratomas, which can contain tissues such as skin and appendages, hair, teeth, nails, bone, cartilage, are usually benign masses. They are often asymptomatic. As they grow up, compression findings due to localization can occur. Intraabdominal dermoid cysts can be torsioned, infectious and ruptured. We can confront with ovary stemmed dermoid cysts in females with gynecological and urological problems or even observed as struma ovary which causes hyperthyroidism clinic. Malign transformation is a problem that we may encounter with being rare. Adenocarcinomas and neuroendocrine tumor transformations in presacral dermoid cysts have been reported in the literature. Squamous carcinomas and carcinoid tumors were observed more frequently. Extra mammary Paget's disease is also described in ovarian and retroperitoneal dermoid cysts. Preoperative evaluation should be performed well since they can be autosomal dominant, sacral agenesis, anorectal region defects and Currarino syndrome known as presacral mass triad. There were palpable mass and pain complaints in our case. Ultrasonography, computed tomography and magnetic resonance imaging are useful in diagnosis. No preoperative pathological sampling was needed in our patient. Although radiologic examination suggests cystic teratoma, malignant transformation should be kept in mind and excision should be done with the notion of oncologic surgery, without harming the surrounding vascular, neural and visceral structures with firm boundaries.

**Keywords:** Dermoid cyst, mature cystic teratoma, gluteal dermoid cyst

## PP-0777 [Colon and Rectum Surgery]

# Necrotizing Fasciitis in the Lower Extremity Developing Secondary to Perforated Rectosigmoid Cancers

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**Introduction:** The diagnosis of necrotizing fasciitis in early stages is difficult but has a progressive course with 50-70% mortality. The affected area is initially painful, but there may be no visual change in appearance. The tissue becomes edematous with erythema and necrosis afterwards and the crepitus is palpable. While abdominal and perineal localized necrotizing fasciitis associated with colorectal malignancy are more frequent, isolated extremity involvement is very rare. In this case, it is aimed to present treatment of rectosigmoid localized tumor perforation, which is complicated with the first finding of lower extremity necrotizing fasciitis.

**Case:** A 68-year-old female patient receiving systemic chemotherapy treatment for metastatic colorectal cancer was admitted to the department of general surgery with complaints of left lower extremity pain, swelling and fever, which continued 3-4 days. Crepitus was observed in cubcutaneous upper thigh, an apparent edema and swelling compared to the right side. Vascular pathology was not detected in the doppler ultrasound, but an appearance consistent with gas was observed in the soft tissues. Abdominal and lower extremity tomography revealed a thickening of the asymmetric wall with a malignant appearance in the rectosigmoid region and an anteromedial and gas and liquid collection extending to the left thigh anteromedial and up to the distal was observed. The patient was urgently taken to the operation. It was observed at the exploration that there was a mass in the rectosigmoid region in the area of the pelvic peritoneum, which showed invasion to the retroperitoneal structures, bladder in the anterior and femoral region. When the adhesions were separated, it was observed that the mass penetrated to this region, surrounding tissues had a necrotic appearance, vascular structures stretched from the superiomedial to the upper thighs and leg and that there was common colonic content and odor. Sigmoid colon and rectum upper part were resected and end colostomy operation was performed. The upper thigh medial was opened and the colonic contents and necrotic tissues in this region were debrided. Abdominal vacuum therapy for 4 sessions, vacuum treatment for 10 sessions to the thigh area, and then the abdominal was closed primarily. The defect in the upper thigh was covered with muscle flaps. Approximately 2 months after the intensive care treatment, the patient was taken to the clinical room and the treatment is still continuing due to compression wound and colostomy infection and opening.

**Conclusion:** It is known that rectal perforations very rarely cause Perineal Fournier gangrene. However, the development of necrotizing fasciitis spreading to the upper thigh and lower extremity is very rare. There are several ways in which faecal material can reach this area. Femoral canal, Obturator foramen and psoas sheath. Despite the presence of polymicrobial infection in this case, septic shock and mortality did not develop. Although the number of surgical procedures for hyperbaric oxygen has been shown to decrease mortality and morbidity, it could not be implemented in this case. There was also no complication in the lower extremity requiring amputation. Limb loss and even mortality can be avoided in these cases with frequent debridement, combined treatment of the abdomen and vac therapy applied to the lower extremities having a course of necrotising fasciitis.

**Keywords:** Colon perforation, necrotizing fasciitis, vacuum treatment

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## PP-0778 [Breast Diseases and Surgery]

# A Rare Breast Tumor: Adenomyoepithelioma

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Adenomyoepithelioma (AME); is a very rare tumor characterized by biphasic proliferation of both epithelial and myoepithelial cells. It has a high recurrence rate when it is resected with inadequate surgical margin although it has mostly benign character. A 33-year-old female patient with a 12-week gestation was admitted to the general surgery department with a palpable mass complaint. BIRADS 4b lesion was detected in the left breast in ultrasound. A true-cut biopsy of the lesion was obtained. The mass was excised upon suspicious result of the biopsy. The final pathology was reported as adenomyoepithelioma. No local recurrence was found at postoperative 9th month.

**Keywords:** Adenomyoepithelioma, true-cut biopsy, breast tumor

## PP-0781 [Breast Diseases and Surgery]

# The Predictive Value of Neutrophil/Lymphocyte Ratio and Thrombocyte/Lymphocyte Ratio on Recurrence in Patients with Idiopathic Granulomatous Mastitis

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**Objective:** Idiopathic granulomatous mastitis (IGM) is a rare chronic inflammatory disease of the breast with unknown etiology. Although IGM is a benign disease histopathologically, it is a clinical picture whose diagnosis and treatment is difficult since it has complications such as fistula and abscess and it is frequently repetitive. The aim of this study was to investigate inflammatory parameters such as neutrophil / lymphocyte ratio (NLR) and thrombocyte/ lymphocyte ratio (TLR) and the relationship between prognosis and recurrence of IGM.

**Material and Methods:** We retrospectively reviewed 31 patients who had not been diagnosed with malignancy or inflammatory breast pathology between January 2010 and April 2016 and who were treated with histopathological diagnosis of IGM. In addition to the demographic information of the patients, body mass index (BMI), pre- and postoperative complete blood count, comorbidities, and recurrence-related information were obtained from clinical records. Patients were evaluated pre- and post-operatively for NLR and TLR values. The predictive effect of pre- and postoperative NLR and TLR values on recurrence was then examined. The results were given as mean, median and frequency; the value of  $p < 0.05$  was accepted as statistical significance.

**Results:** All patients were female and their mean age was  $35.0 \pm 7.3$  (21-49) years. The mean follow-up duration of the patients was  $18.1 \pm 14.2$  (3-66) months. The mean BMI was calculated as  $30.7 \pm 5.7$  kg/m<sup>2</sup>. During the follow-up period, 4 (12.9%) patients had recurrent CRM. Preoperative NLR, postoperative NLR, preoperative TLR and postoperative TLR were found as 3.8 - 3.3 - 161.8 and 151.3 respectively. There was no statistically significant difference between preoperative and postoperative NLR and TLR values ( $p=0.807$  and  $p=0.824$ , respectively). There was no statistically significant relationship between age groups, BMI, preoperative TLR, postoperative TLR and postoperative LNR. However, preoperative LNR level was found to be significantly higher in recurrent IGM ( $p=0.02$ ).

**Conclusion:** Although IGM is a chronic inflammatory disease of the breast, it plays an important role in the surgical practice with the reason of its confusion with carcinoma. Although the etiology is not fully known, the treatment is also controversial. In addition, IGM is a challenging disease for both clinicians and patients, with recurrences and complications during follow-up. The present study demonstrates that the use of NLR as an inflammatory parameter, obtained by a simple complete blood count, may be a guide in the determination of IGM prognosis and recurrence. For more meaningful results, however, multicenter studies involving more patients are essential.

**Keywords:** Granulomatous mastitis, neutrophils, thrombocytes, lymphocytes, ratio

## PP-0782 [Breast Diseases and Surgery]

# Metaplastic Breast Carcinoma: A Rare Subtype Chondroid Metaplasia Carcinoma

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Metaplastic breast carcinoma constitutes 1-2% of all malignant breast lesions and clinically is more aggressive than other breast cancer subtypes. There are five subtypes of metaplastic breast carcinomas according to the 2012 WHO classification; low-grade adenosquamous carcinoma, fibromatous-like metaplastic carcinoma, squamous cell carcinoma, spindle cell carcinoma, mesenchymal differentiation carcinoma (chondroid differentiation, osseous differentiation and other mesenchymal differentiation types). In this article, we present a case of chondroid metaplasia, a subtype of metaplastic carcinoma in a 55 year old female patient.

A 55-year-old female patient presented with the complaint of a palpable mass in the left breast and a stiffness that covered almost the entire breast. In the breast USG performed; a mass having the possibility of malignancy whose inner echo has solid

heterogeneous calcifications in the mid low zone of the left breast with lobulated contours about 6x6 cm was found. True cut biopsy performed: Invasive Ductal Carcinoma Grade 2; Tumor Histological Grade 2, Nuclear Grade 2, ER 40% (+), PR (-), Ki67: 20%, CerB2: (-) EKADERINE: reported as (+). No distant metastases were detected in the preoperative thoracodominant CT. Sentinel lymph node biopsy was sent for frozen analysis during the operation. The axillary dissection was not performed upon arrival of the frozen result as reactive lymphadenopathy. Then, Left Mastectomy was applied because of the mass covering the entire breast of the patient. The hemovac drain in the operation lodge was withdrawn and the patient was discharged on the third postoperative day. Although the optimal treatment strategies for metaplastic breast cancer are still unclear, there are studies that suggest performing mastectomy rather than lumpectomy for the patients with larger masses compared to invasive ductal carcinoma. However, studies have shown that there is no difference between general or disease free survival in patients with metastatic breast cancer treated with modified radical mastectomy or breast conserving therapy. Intraoperative SLNB was performed in this case since tumor covered most of the breast tissue. Mastectomy was performed upon negative SLNB and the operation was terminated. The patient was directed to the Department of Medical Oncology for further postoperative treatment. Metaplastic carcinomas are spread by hematogenous way and the most distant metastases are in the lung and bones. Despite large tumor sizes, lymph node involvement is less common than adenocarcinoma. The incidence of lymph node metastasis can range from 0% to 63%. Patients diagnosed with metastatic breast cancer tend to have a higher stage of disease than those with invasive carcinoma. In addition, chemotherapy shows lower response rates than other basal-like tumors in treatment. In short the prognosis of multiple metastatic carcinoma is worse than conventional invasive carcinoma. Hormone receptor negativity and histopathologic subcomponents of tumor are effective factors on prognosis and treatment.

**Keywords:** Metaplastic breast carcinoma, chondroid metaplasia, mastectomy, lumpectomy

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## PP-0783 [Breast Diseases and Surgery]

# A Rare Soft Tissue Tumor in Differential Diagnosis of Axillary Lymphadenopathy, Synovial Sarcoma

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Synovial sarcoma is a soft tissue tumor with epithelial and mesenchymal differentiation. It is seen in 5.6-10% of all soft tissue sarcomas. Synovial sarcoma with an atypical location, rarely seen in the differential diagnosis of the axillary mass, should also be considered in patients presenting with a palpable mass in the axillary region.

A 68-year-old female patient presented with painless swelling complaints in the right armpit for the last two months. Physical examination of the patient without a chronic illness revealed right axillary conglomerate, fixed, rigid lymphadenopathy. Both breast examinations and abdominal examination were normal and there was no malignancy history in the family.

Right axillary lesion 4 cm in diameter with a lobulated lesion consistent with necrotic lymphadenopathy was reported in superficial tissue ultrasonography performed for examination purposes. There was a suspicious appearance in terms of metastasis. Breast USG and mammography were performed excluding breast carcinoma encountered mostly in female patients in the differential diagnosis of axillary lymphadenopathy in the preplan of the patient. A well-defined, hypoechoic BIRADS 4 malignancy suspicious solid lesion with hyperechogenic interseptal occurrences with millimetric cystic spaces in the right axilla 46x32 mm in size was observed in the USG and Mammography performed in the patient with no palpable detected mass. The patient underwent thoracoabdominal CT for malignancy screening and the result was reported as usual. A true-cut biopsy was taken from the axillary lymphadenopathy having malignancy suspicion in order to establish tissue diagnosis. The result of the biopsy was interpreted as biphasic lesion formed of epithelial and mesenchymal cells, but its primary formation could not be detected. For this reason, the total surgical excision of the mass was decided with the safe surgical margin with diagnostic purpose of the patient. Postoperative pathology was compatible with biphasic type synovial sarcoma histopathologically. The patient was directed to the oncology department for follow-up and treatment. Synovial sarcoma is a soft tissue tumor with epithelial and mesenchymal differentiation. It occurs in 5.6-10% of soft tissue sarcomas. Histologically, there are 3 subtypes, monophasic, biphasic and poorly differentiated. It is seen mostly in lower extremity especially around the knee and the third-fifth decades. In our case, there was a synovial sarcoma of advanced age, rare and atypical localization originating from the shoulder joint. The prognosis of the disease is poor and the 5-year and 10-year survival rates are 38-76% and 20-63%. Removal of the tumor with safe surgical margin is important for prognosis, and it is the most important factor in preventing local recurrence. There are studies indicating that performing neoadjuvant chemoradiotherapy preoperatively according to grade, size and localization in synovial sarcoma treatment, followed by surgery, and postoperative adjuvant chemotherapy treatment have a positive contribution to survival. In the axillary lymphadenopathy for which patients admit to the department of general surgery, atypically located, rare synovial sarcoma as well as diseases such as breast carcinoma, metastasis of solid organ carcinoma such as lymphoma, leukemia and stomach cancer, tuberculous lymphadenitis and cat scratch should be considered.

**Keywords:** Breast carcinoma, soft tissue tumor, axillary lymphadenopathy, excision, synovial sarcoma



## PP-0784 [Breast Diseases and Surgery]

## Evaluation of the Necessity of Surgical Excision in the Treatment of Intraductal Papillomas of the Breast

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**Objective:** Papillary lesions of the breast refer to multiple lesions that may be benign, atypical, and malignant. There is a general consensus about excision of the lesion if there is malignancy or atypia in the result of image guided biopsy (IGB) in cases considered to have intraductal papillomas (IDP) in imaging methods. However, surgical treatment of benign intraductal papilloma is controversial. We aimed to investigate the necessity of surgical excision by examining the patients diagnosed with intraductal papilloma by various biopsy methods.

**Material and Methods:** In our study we retrospectively reviewed the records of 3368 patients who underwent image guided breast biopsy and incisional-excisional breast biopsy followed by different surgeons at Health Sciences University Ankara Education and Research Hospital between January 2011 and February 2017. Fifty one cases of IDP among the 67 reports that had "Intraductal Papillom" labeling in the pathology report, were included in the study. Demographic, clinical, pathological, radiological and surgical characteristics of these cases were examined.

**Results:** Definite pathological result of 13 of 35 surgically excised lesions (37.1%) were reported as atypical papilloma or papilloma along with ductal carcinoma insitu and 8 of these cases were interpreted as benign intraductal papilloma in the preoperative IGB. The incidence of atypical-malignancy was significantly higher in cases with solid mass without ultrasonographic dilatation ( $p=0.003$ ) and with peripheral lesions ( $p=0.046$ ).

There are many studies suggesting surgical excision, and close follow-up instead of surgical excision in the treatment of benign papillary lesions. In our study, definite pathological diagnosis of 8 patients (53.3%) of 15 patients with benign IDP and who underwent surgery was atypical papilloma or DCIS and atypical papilloma as a result of IGB was reported in only 2 out of 10 patients (20%) whose definite pathological diagnosis was atypical papilloma or DCIS and who underwent preoperative IGB. In previous studies, the age, being symptomatic, having simultaneous ipsilateral breast carcinoma, radiological dimension of the lesion, microcalcification as a result of imaging and IGB were evaluated as predictive factors for the diagnosis. When we looked at the ultrasonographic imaging features in our study, among the patients with benign IDP as a result of IGB, all of the 7 patients in the group with definite pathologic result of benign IDP had a solid mass and 5 patients had ductal dilatation. On the contrary, it was observed that there was a solid mass in all of the 8 patients in the group having definite pathology result of atypical papilloma or papilloma with DCIS however none of them was accompanied by ductal dilatation and the difference between the two groups was significant ( $p=0.007$ ).

**Conclusion:** We conclude that surgical excision is necessary in cases with suspected IDP because the number of cases having definite pathological result of atypical papilloma or having papilloma with DCIS is high in both the study group and in cases considered to have benign IDP as a result of image guided biopsy. The possibility of atypical-malignancy increases in the cases with peripheral lesions seen as solid mass without ultrasonographic dural dilatation.

**Keywords:** Intraductal papilloma, excisional biopsy, image guided biopsy, atypia

## PP-0785 [Breast Diseases and Surgery]

## Paget's Disease of the Breast; 2 Different Case Presentations

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**Introduction:** Paget's disease is manifested by eczematous changes in the nipple as a preliminary finding of the cancer. Although it is rarely seen, it is associated with cancer at the rates between 92% and 100%. Patients with Paget's disease admit to the dermatology departments and most of them are wasting their time trying to be treated like dermatitis. We aim to present 2 cases with different Paget's diseases.

**Case 1:** A 45-year-old female patient was admitted to different dermatology departments for a scurfy, crusted, itchy lesion on the left nipple for about 1 year. Topical treatments were suggested. The patient, whose complaints did not regress, was directed to the general surgery department. An incisional biopsy was performed from the areola of the patient. The patient whose pathology result was Paget's disease, was admitted to our clinic. The patient's physical examination revealed a crusted, scurfy lesion covering the entire areola of the left breast. A clear mass with a border and lymph node in the axilla were not palpable. There was no significant feature in the patient's medical history. Breast MR was performed for the patient. A suspicious lesion under the nipple in a large area was detected. The patient was prepared preoperatively and operated. The sentinel lymph node was evaluated. Metastasis was not detected. The patient underwent simple mastectomy. As a result of the pathology, a carcinoma focus of 6 mm was detected within the 8 cm comedo necrosis carcinoma in situ. ER and PR was negative and c-erbB2 was positive. The patient was initiated paclitaxel and trastuzumab. There was no pathology in the 3rd month control.

**Case 2:** A 50-year-old female patient was admitted to our hospital's dermatology department due to a lesion on her right nipple for 6 months. The pathology of the patient who underwent skin biopsy in dermatology department resulted in Paget's disease of the breast. The patient was directed to our clinic. The physical examination of the patient revealed crusted, scurfy, and eczematous lesion that covered the entire right nipple. No mass with a border in the breast and lymph node in the axilla was found in the physical examination. No significant features were found in the patient's medical history. Breast ultrasonography, mammography and breast MR were performed. No significant pathology was detected. The patient was informed, preoperatively prepared and taken to the operation. The sentinel lymph node was evaluated. Metastasis was not detected. The patient underwent simple mastectomy. Pathology resulted in Paget's disease of the breast and benign breast tissue. No significant pathology was present in the 3rd month control of the patient.

**Conclusion:** Paget's disease can be seen with invasive breast cancers. Early diagnosis and treatment planning is very important to prevent advanced stage cancer.

**Keywords:** Paget's disease of the breast, invasive cancer of the breast, sentinel lymph node

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## PP-0786 [Breast Diseases and Surgery]

# Stewart-Treves Syndrome: Case Report

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**Introduction:** Stewart-Treves Syndrome is a rare malignant mesenchymal tumor that is caused by prolonged lymphedema. This tumor can be induced by lymphedema formed as a result of radical mastectomy and axillary dissection to treat breast cancer. In this study, we aimed to present a case of Stewart-Treves syndrome who was admitted to our clinic with a complaint of axillary mass.

**Case:** A 54-year-old female patient who was admitted to our clinic with a left axillary mass was operated due to ductal breast carcinoma. Left modified radical mastectomy and axillary lymph node dissection were performed 4 years ago. The patient who had chemotherapy and radiotherapy had complaints of lymphedema postoperatively. A swelling in the axillary region was added to this lymphedema for several months. Angiosarcoma was detected as a result of the biopsy result made from the mass in the axillary region. The patient was transferred to medical oncology upon detecting distant metastasis of the unresectable mass fixated in the chest wall in radiological examinations.

Stewart-Treves syndrome is used for angiosarcoma formed of chronic lymphedema developing due to reasons such as congenital lymphedema or mastectomy. Deterioration of the lymphatic flow results in increased protein-rich interstitial fluid. This destroys the immune system and the activity of the immune cells. The body tries to compensate this situation by trying to create collateral lymphatic and vascular circulation. However, neoangiogenesis can result in tumor formation due to current immunosuppression and it can manifest itself with a malignant mesenchymal tumor called Stewart Treves Syndrome. Most of the cases consist of female patients operated due to breast cancer. It is presumed that this sarcoma leads to induction directly by radiation therapy or indirectly by causing sclerosis of the lymph nodes. The prevalence of this rarely seen sarcoma decreases by the increase of the conservative treatment of breast cancer, current surgical equipment and radiotherapy techniques. The mean age of the cases is 60 years and it is seen within an average of 10 years after breast surgery. Our case underwent breast surgery when she was 50 years old and angiosarcoma developed 4 years later. If the sarcoma is isolated on the extremity, it can be cured by amputation. However, chemotherapy and radiotherapy may be beneficial in cases where the R0 resection is not possible, such as the axillary region, which we present in our case.

**Conclusion:** Stewart-Treves syndrome is a rare sarcoma associated with modified radical dissection and possibly radiotherapy applied in breast cancer. Clinicians should keep in mind that this sarcoma may develop in all patients who develop lymphedema. It is important to remember the importance of fighting lymphedema by compression pumps and physiotherapy in patients.

**Keywords:** Breast cancer, lymphedema, angiosarcoma

## PP-0787 [Breast Diseases and Surgery]

## A Case of Desmoid Tumor Imitating Breast Cancer

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**Introduction:** Breast fibromatosis is a rare benign tumor. It is characterized by proliferation of fibrous tissue originating from muscle aponeuroses. Generally, the pectoral muscle is derived from the fascia. It has a course with local invasions and recurrences, but it does not cause metastasis. They constitute 0.3% of solid tumors and 3.5% of fibrous tumors of the breast. We aimed to present a rare case of breast fibromatosis having similar physical examination and radiological features of breast cancer.

**Case:** A 34-year-old female patient presented with a mass on the right breast. There was no significant feature in her history. There was no history of trauma or previous breast surgery. A fixed mass with irregular margin having a diameter of 4cm was detected in the upper external quadrant of the right breast in the physical examination. Axillary lymph nodes were not found. Ultrasonography revealed a hypoechoic, solid, lobulated, irregular mass lesion in the upper external quadrant of the right breast. Benign changes, in which intense fibroblasts were observed, were detected in the true-cut biopsy. An unenhanced solid mass was seen on MR imaging of the breast. The mass was totally removed with the skin on it and the underlying pectoral muscle fascia. Pathologic examination revealed no malignancy and the lesion was detected to be breast fibromatosis. Breast fibromatosis (desmoid tumor) is a rare soft tissue tumor originating from breast tissue or underlying pectoralis major muscle, fibroblast originated, being able to imitate breast cancer clinically and radiologically. It is usually seen in the reproductive period. Etiopathogenesis is not fully known. Past trauma, surgical scars, silicone implants, hormonal factors and pregnancy may be the case. Coexistence of familial adenomatous polyposis (FAP) and Gardner syndrome have been shown. Clinically it can occur as palpable, painless, hard, irregular margin and can have findings of thickening of skin. Distinguishing it from the breast cancer is very difficult radiologically. Histologically, fibroblast and collagen rich, low-grade, hypocellular fusiform cells invasive to neighboring muscles are seen in the lesion. Malignant-benign separation cannot be made without histopathological examination. Large local excision should be performed in case surgery is considered. Recurrence is observed in 1/4 of the cases. Radiotherapy, chemotherapy and anti-estrogen therapy can help control or eradicate the lesion. It has been reported in some studies that nonsteroidal anti-inflammatory drugs and ascorbic acid and tamoxifen are used to prevent the growth of the desmoid tumor.

**Conclusion:** Breast fibromatosis can imitate breast cancer with clinical and radiological imaging features. Axillary involvement does not occur. These cases should be colonoscopically examined in terms of FAP and Gardner's syndrome. The final diagnosis can only be made histopathologically. Total excision of the mass is the main treatment method.

**Keywords:** Fibromatosis, desmoid tumor, breast cancer

## PP-0788 [Breast Diseases and Surgery]

## A Case of Metachronous Bilateral Breast Cancer with Macromastia; Inadequacy of Imaging Methods

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**Introduction:** Breast cancer is the most common cancer type in women. The risk of developing cancer in other breast of the women with breast cancer increases. The incidence of bilateral breast cancer (BBC) in women is between 2% and 11%. The BBC is subdivided into two subgroups, synchronous and metachronous, according to the time of appearance of the second tumor. BBC usually occurs as a second primary cancer. Breast cancer makes most common metastasis to bone. These metastases are mostly observed in thoracic and lumbar vertebrae. There are difficulties in examination and imaging methods in patients with macromastia.

**Case:** The patient in whom mass excision to the right breast was applied at the external center was admitted to our outpatient clinic on obtaining of pathological diagnosis of "invasive ductal carcinoma". The patient had scarring on the upper external quadrant of the right breast in the examination. Diffuse inflammation was present in the breast. The patient had bilateral macromastia and obesity. Her height was 160 cm, weight was 116 kg and BMI was 45. A 4 cm diameter conglomerate lap was detected on the right axilla in control breast USG and mammography. Paraffin blocks were re-evaluated. It was stated that the tumor was 2 cm in diameter and that the surgical margin was intact. The chemotherapy (CT) decision was made in the breast council. Progression was seen in the patient's CT period. Surgical decision was made. Right modified radical mastectomy (MRM) was performed in the patient. The pathology was evaluated as "sclerosing adenosis, fibrocystic changes, invasive ductal carcinoma metastasis and perinodal infiltration, 14/18 right axillary lymph nodes". CT and radiotherapy (RT) decision was made at the council. The patient

was taken to oncology treatment and follow-up. We were consulted again because of cellulitis in the left breast of the patient almost one year later. In the patient's examination there was an important size increase and hyperemia in the breast.

There was no finding of malignancy on breast USG and mammography. There was no response to cellulitis treatment in the patient for 15 days. Balance problem occurred in the patient. The patient was informed and a mastectomy decision was made. The patient was treated and discharged when influenza developed. In this period, the left hip fracture occurred in the patient who fell in the house. The curettage material from the fracture site of the patient, who was operated by Orthopedics, was evaluated as "breast carcinoma metastasis". Left MRM was applied to the patient one month later. The specimen was approximately 6 kg. The pathology was evaluated as "mixed type breast carcinoma (invasive ductal + invasive lobular carcinoma), carcinoma metastasis and perinodal infiltration, 19/19, left axillary dissection lymph nodes". The council issued a decision of CT+RT. During the follow-up of the patient for severe back pain, metastasis and mild myelomalacia were detected between T 4-9 in thoracic MR. The patient for whom an operation was recommended by Brain Surgery did not accept it. In the Palliative Support Clinic, while treatment and follow-up for comorbid diseases was going on, the patient died due to sudden cardiopulmonary arrest in post-operative 4th month.

**Conclusion:** There is difficulty in diagnosing breast cancer in patients with macromastia. Close follow-up is required by experienced teams in these patients after breast cancer is diagnosed. Surgery should not be delayed in patients who do not respond to conventional treatments.

**Keywords:** Bilateral breast cancer, macromastia, metastasis

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## PP-0789 [Breast Diseases and Surgery]

# Primary Solid Neuroendocrine Carcinoma of the Breast

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Despite the presence of neuroendocrine tumors in many parts of the body, the existence of true carcinoid tumors in the breast is controversial. For this reason, it is very rare. A 77-year-old female patient was admitted to our outpatient clinic because of a palpable mass in the right breast. It was found that this patient was admitted to our hospital with a smaller size mass in the same breast and in the same localization 2 years ago and the true-cut biopsy was fibroadenoma. The patient, who did not come to the control follow-ups, was admitted again upon the rapid growth of the mass in the breast. In the breast ultrasonography performed, a solid mass lesion with 80mm\*50mm size and regular margins, having a heterogeneous internal structure and involving locally cystic areas, filling the entire right breast was observed. Axillary pathologic lymphadenopathy was not observed. MR imaging of the breast revealed a solid and lobulated solid mass lesion sized 70mm\*40mm\*25mm filling the parenchyma in all areas of the right breast. The result of the true-cut biopsy came as a malignant epithelial tumor. The patient underwent radical mastectomy surgery. The patient's pathology result was obtained as mucinous carcinoma + solid neuroendocrine carcinoma (mixed type invasive breast carcinoma). Synaptophysin and chromoginin were detected positively in the evaluation of the pathology specimen. While 25 lymph nodes were reactive, no metastatic lymph node was detected. As is well known, breast neuroendocrine tumors are very rare and standard treatment protocols have not yet been fully clarified. Local and distant recurrence rates are quite high.

**Keywords:** Breast cancer, neuroendocrine tumor, treatment

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## PP-0790 [Breast Diseases and Surgery]

# Rare Myofibroblastic Sarcoma Case in the Breast

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**Introduction:** Myofibroblastic breast sarcoma, first described in 1887, is very rare. It can give symptoms with the palpable mass in the breast. Breast Ultrasonography (USG), Mammography and Breast Magnetic Resonance Imaging (MR) are used in the diagnosis. Treatment has different modalities including combination of surgical resection, radiotherapy and chemotherapy.

**Case:** A sixty-six-year-old female patient presented with a palpable mass complaint in the upper external quadrant of the left breast. She was operated due to a mass detected in the left breast during the screening and a malign mesenchymal tumor was detected. The patient did not continue the treatment after the operation and was admitted to our clinic due to palpable mass

in the breast. A mass of 6x6 cm was detected in the left breast between the quadrant 1-5 hour. Breast USG, Mammography and MR imaging revealed a mass of 6.5x5.5 cm, having lobulated contour and microlobulations in the upper external quadrant of the left breast. No pathological image was found in the left axilla. Left simple mastectomy and sentinel lymph node biopsy were performed and the frozen biopsy was evaluated as reactive lymph nodes. Mastectomy material was evaluated as malign mesenchymal tumor and myofibroblastic sarcoma.

**Conclusion:** Breast myofibroblastic sarcoma is very rare, and there are a limited number of case reports and studies in the literature. Resection should be performed to provide a negative surgical margin surgically, and radiotherapy and/or chemotherapy options should be added to the treatment. It should also be considered that there may be a myofibroblastic sarcoma in the differential diagnosis of mass lesions in the breast.

**Keywords:** Breast, mass, myofibroblastic sarcoma

## PP-0791 [Breast Diseases and Surgery]

# Rabdomyosarcoma Metastasis to the Breast: Case Report

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Rhabdomyosarcoma is a soft tissue sarcoma commonly seen in the pediatric age group and in adolescent age and constitutes 4-8% of all childhood malignancies. Rhabdomyosarcoma can usually originate from many places such as head, neck, orbita, genitourinary tract, retroperitoneum, extremities, trunk, gluteal region, mediastinum and gastrointestinal tract and its breast metastasis is very rare (6%). A 14-year-old female patient was diagnosed with rhabdomyosarcoma in the right cervical region 2 years ago, and upon detecting a suspicious mass in the upper external quadrant of the left breast and involvement of increased fluorodeoxyglucose (FDG) in the same region in Positron Emission Tomography (PET-CT), she was referred to us. The interventional radiologist performed ultrasonography-guided marking and then lumpectomy was performed to cover the marked masses. The lodge was marked by hemoclips and the process was terminated. Reoperation was planned upon obtaining the pathology report as surgical margins were positive mixed type (20% embryonal, 80% alveolar) rhabdomyosarcoma. The old lodge was extensively excised with the reotroareolar region to cover the muscle fascia. It was decided to perform modified radical mastectomy (MRM) with the approval of the relatives of the patient since the lesion of the frozen lesion was persistent at the medial, lateral, anterior surgical margin, there were suspicious invasion areas at the superior and inferior surgical margins, and no protection of the nipple for the anterior-negative surgical margin could be provided. As a result of peroperative oncology consultation, mastectomy was completed by deciding not to perform axillary lymph node dissection since lymphatic spread would not happen due to tumor's being sarcoma. Pathologic outcome of MRM was reported as "Multiple foci of tumor cells were observed and embryonal type rhabdomyosarcoma foci were observed at 1 mm distance from lateral surgery. No tumor was seen in the medial, superior, inferior, posterior surgical margin. It was learned that right MRM was performed upon multifocal masses in the opposite breast of the patient under the follow-up of oncology and general surgery departments in the postoperative 9th month.

Although almost all of the adolescent age breast masses are benign, metastatic breast cancer should be kept in mind in patients with malignancy history. A close follow-up of outpatient clinic is very important in the patients in adolescent age group having especially rhabdomyosarcoma history, and breast examination should be a part of the physical examination.

**Keywords:** Adolescent, rhabdomyosarcoma, breast, metastasis

## PP-0793 [Breast Diseases and Surgery]

# Breast Necrosis Case Developing After a True Cut Biopsy

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**Introduction:** One of the most important tools for diagnosis in patients with the mass diagnosis in the breast is the true-cut biopsy. The main complications are hematoma (2-10%), infection (4-6%) and pain (12-18%). The development of necrosis of the skin and breast tissue was not found in the literature. In this case report, a patient who developed necrosis of the skin and breast as a rare complication after true cut biopsy was presented.

**Case:** A 70-year-old female patient presented to our polyclinic with a palpable mass complaint in the right breast. There was no previous active breast complaint and no biopsy was performed. Her family had no ovaries or breast cancer stories. There were grade 3 ptosis in both breasts in the physical examination. There was a mobile mass having approximately 5cm size and with regular size in the upper internal quadrant of the breast. Breast ultrasound revealed heterogeneous area adjacent to areola at 2 o'clock position in the right breast, diffuse calcifications in both breasts, and asymmetric density increase in the right breast (BIRADS 4A). It was decided to do a biopsy of the lesion with a true cut. Department of interventional radiology performed a true cut biopsy to the patient with a 14 G needle. Complications did not develop in the early period after the procedure. The pathology result was reported as "fibrocystic changes, adenosis, microcalcification". After 15 days, the patient was admitted to the outpatient clinic with the right breast pain and color change. In the physical examination, there was a necrotic area in the right breast that started from the area where the biopsy was performed and covered the entire upper inner quadrant. The patient was operated urgently. Mastectomy was performed to include necrotic skin and breast tissue. The patient was discharged on the 4th day without any postoperative problems.

**Conclusion:** True cut biopsy of breast lesions is widely preferred due to less invasive procedure and low complication rates. However, as in the case we presented it should not be forgotten that it is possible to develop ischemia and necrosis after taking a true cut biopsy from the masses of the patients with large size and droopy breasts and from the masses in the upper internal quadrant since they involve medial perforator vessels.

**Keywords:** True cut, biopsy, breast, necrosis

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## PP-0794 [Breast Diseases and Surgery]

# Correlation of Histopathological Outcomes with BIRADS Classification of Masses in the Breast

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We aimed to evaluate the reliability of BIRADS Classification by assessing the correlation between BIRADS Classification System and Pathology results of patients who were admitted to our general surgery departments with mass, pain, and discharge complaints in the breast. This retrospective study was carried out by evaluating epicrisis forms and examination results (tumor markers) of a total of 150 female patients, in BIRADS 3, BIRADS 4 (4a, 4b, 4c) subgroups and BIRADS 5 subcategories, who was admitted to the Ministry of Health Dışkapı Yıldırım Beyazıt Training and Research Hospital General Surgery Departments outpatient clinics with mass, pain and discharge complaints in the breast between 2009-2011. Of the 150 patients evaluated, 21 were in the BIRADS 3 group, 44 were in the BIRADS 4a, 35 in the BIRADS 4b, 22 in the BIRADS 4c group and 28 in the BIRADS 5 group. All of the BIRADS 3b class patients (100%), 43 patients (97.72%) in BIRADS 4a class, 34 patients (97.14%) in BIRADS 4b class, 8 patients (36.36%) in BIRADS 4c class and One patient (3.57%) in BIRADS 5 class was found to be benign. 1 patient (2.28%) in BIRADS 4a group, 1 patient (2.86%) in BIRADS 4b group, 14 patients (63.64%) in BIRADS 4c group and 27 patients (96.43%) in BIRADS 5 group were malignant. Positive predictive value of BIRADS 3 class was found as 100% in light of pathological data. The positive predictive value of the BIRADS 4a class was 2.28%, 2.86% of the BIRADS 4b class, 63.64% of the BIRADS 4c class and 96.43% of the BIRADS 5 class.

As can be seen from these results, unnecessary biopsies will be avoided if subgrouping of BIRADS 4 is done by experienced radiologists. As a result of our study, it was determined that follow-up of the BIRADS 3 group was appropriate, and verification with one of percutaneous biopsy methods would be appropriate in BIRADS 4a and BIRADS 4b group, and especially BIRADS 4c and BIRADS 5 groups. We believe that the division of the BIRADS 4 classification into subgroups in the light of this data is an important guide for approaching the masses identified in the breast.

**Keywords:** BIRADS classification, subgroups of BIRADS 4 groups, mass lesions of the breast

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## PP-0795 [Breast Diseases and Surgery]

# The Youngest Male Breast Paget's Disease with Invasive Ductal Carcinoma in the Literature

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**Introduction:** Paget's disease of the breast (PDB) accounts for approximately 1% of all breast cancers. Male breast cancers account for about 1% of all breast cancers. Paget's disease in men is a very rare breast cancer and therefore there is no standard preoperative evaluation and procedure. In this case report, we aimed to discuss complaints, diagnosis, treatment and postoperative follow-up of the patient in the light of the literature.

**Case:** A 39-year-old male patient was admitted to the Namık Kemal University breast outpatient clinic with complaints of intermittent redness and enlarging mass (Picture 1) in the left nipple for the last 3 months. No risk factors such as family history, hormone use and radiotherapy were found in his medical history. Excisional biopsy decision was made on the absence of palpable mass in the breast of the patient who had a crusted, erythematous mass of about 1 cm in the left breast. An excisional biopsy revealed Paget's disease of the nipple accompanied by invasive ductal carcinoma infiltration of 1x0.8x0.8 cm in size in dermis. No pathology was detected in axilla and breast in mammography and breast MRI. Glandular structure consistent with bilateral gynecomastia was found in the breast ultrasound, and a suspicious focus was detected in the 3 mm residual angle in the medial vicinity of the left nipple. Axillary lymphadenopathy was not detected. Simple Mastectomy and Sentinel Lymph Node Biopsy (SLNB) were performed. Axial dissection was not performed because SLNB was negative. Treatment with chemotherapy and hormone therapy was planned.

**Conclusion:** The mean age of men who was admitted with PDB in the literature is 60 (43-81). Our case is the youngest male PDB in the literature. The delay in the treatment of illness in males is approximately eight months from the beginning of the average symptoms. Although males are more likely to present with symptoms earlier and histologically are not different from females, the prognosis for 5 years with a 20-30% survival rate tends to be worse. Scaly, cracked, leaky, and erythematous skin lesions develop slowly on the nipple or rarely on areola clinically. It starts from the nipple and move towards the areola and the breast skin around it. Trying to treat skin lesions on the nipple and areola with topical steroids considering them as dermatitis or benign dermatological lesions is the most important reason for this delay in diagnosis. In our case, since biopsy decision was made without continuing the treatment as dermatitis despite his young age, T1N0M0 diagnosis was established and early stage breast cancer treatment was started. We emphasize the importance of starting the treatment after being certain of the diagnosis by making skin biopsy before starting treatment in clinically suspicious cases even the patient is at an early age.

**Keywords:** Biopsy, male breast cancer, invasive ductal carcinoma, breast paget disease

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## PP-0796 [Breast Diseases and Surgery]

# Differences Between Breast Cancer Screening Guidelines

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**Introduction:** The American Cancer Society (ACS), the US Preventive Services Task Force (USPSTF), the American College of Obstetricians and Gynecologists (ACOG), The National Comprehensive Cancer Network is the leading providers of guidelines for breast cancer screening in the United States. The common recommendation of these organizations is to screen asymptomatic, average-risk, 50-74 year-old women by mammography. However, the recommendations of these organizations about screening frequency with mammography are different. There are also disagreements among these organizations concerned about whether they examine their own breast and clinical breast examination, whether mammography examination be done for women aged 40-49 years, and after what age there is no need for mammography screening.

**Discussion:** The American Cancer Society recommends that women between the ages of 45 and 54 should have a mammography once a year. While they recommend mammography examination for women aged 55 and over screening every two years, they suggest that yearly screening can be continued. American Preventive Services Task Force recommends women between the ages of 50 and 74 to have mammography once every two years. The American Association of Gynecologists and Obstetricians has recommended a screening every year or two. The National Comprehensive Cancer Network recommends annual mammography screening. The American Cancer Society does not recommend clinical breast examinations. American Protective Services Task Force states "there is not enough data to recommend or not recommend a clinical breast examination". However, the American Protective Services Task Force says "No" in response to the question "Should I teach my patient to examine her breast?" The USPSTF is against clinicians' teaching the patients breast examination (Grade 4 recommendation). The American Association of Gynecologists and Obstetricians and the National Comprehensive Cancer Network recommend that women between the ages of 25 and 39 be treated once every 1-3 years, and women over 40 years should undergo annual clinical breast examinations.

**Conclusion:** The differences between breast cancer screening guidelines will be discussed during the presentation. The importance of screening asymptomatic, average-risk, 50-74 year-old women by mammography as the common recommendation of these institutions will be emphasized. Additionally, 21st National Surgical Congress will try to establish Turkey Breast Cancer Screening Recommendations.

**Keywords:** Breast, cancer, screening, guide, mammography, examination

## PP-0797 [Breast Diseases and Surgery]

# Synchronous Bilateral Male Breast Cancer: A Rare Case

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**Introduction:** Less than 1% of all breast cancers occur in men. Breast cancer constitutes 0,17-1,5% of the cancers in men. Because of their rare occurrence, most of the information is based on single-center retrospective studies or studies of female breast cancer (CMC). The incidence of male breast cancer (EMR) increases with age. Because it is a rare case, bilateral male breast cancer is presented.

**Case:** A 74-year-old male patient was admitted with the complaint of breast swelling. He stated that the masses were small and painless at the beginning but they gradually grew. At the same time, he stated that he noticed palpable, painful and increasingly growing swellings under the left armpit. There were no trauma histories for both breasts in his medical history. His daughter had been operated due to breast cancer. In the physical examination, there was a protruding, hard lesion on the left breast and a pullout in the right nipple. A mass of 2.5 cm in size just below the right nipple and 5.5 cm in size of the left breast were found with palpation. Left axillary lymph nodes were palpated. The patient's hormonal profiles were normal. CA15-3 level was 53.4 U / mL (N: 0-31, 3 U / mL). The patient refused to have genetic analysis for BRCA1 / 2 genes. Radiologically, both ultrasonography and Magnetic Resonance Imaging showed masses in the subareolar area of both breasts. In addition, there was no evidence of metastatic disease in chest radiography and liver ultrasonography. Preoperative F-18 fluorodeoxyglucose (18F-FDG) positron emission tomography / computed tomography (PET / CT) was performed and bilateral intake with cutaneous invasion in the SUVmax subareolar areas of the left breast and mild involvement in both axillas were detected. Invasive ductal carcinoma on the right breast and papillary neoplasia with in situ carcinoma on the left breast were detected in needle biopsy. Fine needle aspiration cytology of the left axillary lymph node was negative. Left modified radical mastectomy and right simple mastectomy and right sentinel lymph node biopsy (negative) were performed. Histopathological examination revealed invasive ductal carcinoma (maximal diameter 2.5 cm) in the right breast and intracystic papillary carcinoma (maximum diameter 5.5 cm) in the right breast. TNM classification was consistent with stage IIIa.

**Conclusion:** The diagnosis of male breast cancer can be made later than that of female breast cancer and it is at a more advanced stage at the time of diagnosis. The importance of advanced examination for early diagnosis of skin lesions developing and not healing in male patients was emphasized.

**Keywords:** Male breast cancer, synchronous tumor, invasive ductal carcinoma

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## PP-0798 [Breast Diseases and Surgery]

# A Rare Case of Juvenile Papillomatosis; Follow Up or Excision?

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Juvenile papillomatosis is a rare breast disease in young women. Etiology is unknown. There is often a breast cancer history in the family. It is associated with the risk of increased breast cancer. History, clinical and radiological findings help to diagnose. The aim of this case report is to discuss the rarely seen juvenile papillomatosis with clinical, radiological, pathological findings and surgical approach. A 26-year-old woman was admitted to our clinic with a palpable mass in the right breast. In her examination, there was an irregular mobile mass at the 6 o'clock position in the right breast. The current mass of the patient was followed by ultrasonography (US) at the external center for 5 years. US was asked again since the mass had irregular margins in the examination. In the US, a mass containing a large number of cysts at at 6 o'clock position in the right breast was observed, but also a vascularized solid component was observed. Magnetic resonance imaging (MRI) was also performed due to this solid component and the patient's family history. The breast contained a large number of cysts within the mass defined on the MRI and showed a suspicious type 3 dynamic curve for malignancy. Fine needle aspiration biopsy was performed from the mass due to suspicious radiological findings. Pathology result was received as cyst content. However, when evaluated together with clinical, history and radiological findings, a preliminary diagnosis of juvenile papillomatosis in the patient was considered and the mass was excised with a clear surgical margin. Pathology result showed "Swiss Cheese" feature which is typical for juvenile papillomatosis, and



papillomas were present in many cysts. One of the papillomas contained carcinoma in situ focus. Juvenile papillomatosis, a rarely seen and known phenomenon, is often confronted as lesions containing numerous cysts in tricenarian women who have positive family histories. Since clinicians and radiologists are also less aware of the lesions and can be followed for a long time as fibrocystic disease. Although these phenomena can be stabilized for a long time, excision of the lesions is recommended because the risk of developing breast cancer is increased in the following period. In our case, the case was followed for a long time but juvenile papillomatosis was considered when the clinical and radiological findings were evaluated and the lesion was excised. Pathology results also confirmed this diagnosis. Juvenile papillomatosis should be kept in mind in patients with complicated cystic lesions at a young age and should be evaluated together with history, physical examination and radiological findings. In these cases, thick needle biopsy should be preferred rather than fine needle aspiration biopsy and excision with clear surgical margin should be recommended in terms of possible synchronous tumor. However, extensive surgical resection or prophylactic mastectomy is not recommended. As a result, surgical excision can prevent breast cancer development in juvenile papillomatosis cases and early diagnosis and treatment can be provided.

**Keywords:** Juvenile papillomatosis, ultrasonography, surgical excision

## PP-0799 [Breast Diseases and Surgery]

# A Rare Case Presentation; Mondor's Disease of the Breast

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**Introduction:** Mondor's disease is a rare benign disease characterized by thrombophlebitis of the subcutaneous veins of the breast and anterior chest wall. It usually occurs in women between 30 and 60 years of age. The skin gives clinical signs of pain and stiffness in the superficial veins. In this case, we aimed to present our case, which we identified Mondor's disease.

**Case:** A thirty six-year-old female patient was admitted to outpatient clinic because she felt pain and stiffness in her right breast for two weeks. Superficial veins of the right breast could be observed by inspection in the breast examination of the patient with no chronic disease history, and venous structures starting from the anterior axillary line and surrounding areola consistent with thrombophlebitis were detected with palpation. The patient did not have any blow on this breast or operation history. Varicose lesions were present in the bilateral lower extremities. There was no routine medication taken by the patient followed by the cardiovascular surgeon for this reason. Hemogram, biochemical parameters, fibrinogen and D-dimer levels were normal. Bilateral breast ultrasonography revealed dilated superficial veins having a tendency of connecting with each other in the upper external quadrant of the right breast, with a size of 5.8 mm in the widest area. It does not respond to compression. The walls are thicker than normal. It was interpreted as being consistent with superficial thrombophlebitis in the breast. The patient was offered non-steroid anti-inflammatory tablets and hot compress treatment. It was found that after two weeks there was a marked decline in the visible thrombosed veins, a decrease in pain complaints, and a complete treatment at the end of 4 weeks.

**Conclusion:** Mondor's disease was first defined by Henry Mondor in 1939. It is more common in middle aged women. The pathophysiological mechanism of the disease is uncertain. Superficial veins of the breast and anterior chest wall are involved. Breast biopsy, trauma, axillary metastasis, tightness of the clothes, or trauma exposed to that area are among the possible etiological causes. Diagnosis is usually made clinically, but diagnostic imaging is important to determine if a palpable mass is a thrombosed superficial venous cord. Doppler USG can be used in the diagnosis. It is also necessary to exclude possible malignancies. In treatment, hot compress is applied to the area with non-steroidal anti-inflammatory drugs (NSAID). We treated the patient with NSAID treatment as well as hot compress application. As a result; Mondor's disease is a rare condition and clinicians should keep in mind that these signs and symptoms may be a Mondor's disease after malignancies have been excluded.

**Keywords:** Breast, Mondor, thrombophlebitis

## PP-0800 [Breast Diseases and Surgery]

# A Rare Mass that Mimics Male Breast Cancer: Pilomatrixoma

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**Introduction:** Pilomatrixoma is a benign tumor with deep dermal or subcutaneous localization and which originates from the matrix cells of hair follicles. It is usually seen in the first two decades of life, and rarely turns into pilomatrix carcinoma. It is most commonly found in the head and neck region and very rarely in the breast.

**Case:** A 43-year-old male patient was admitted to the hospital due to a palpable mass in the for two years. In the examination, a lobular mass with firm consistency was palpated on the upper external quadrant of the right breast.

A homogenous, hyperechoic solid mass lesion with microlobulations in the size of 30x12 mm, approximately 3 cm from the right breast nipple at the 2-3 o'clock position was observed in the USG. Microcalcifications were seen in the mass. There was no significant blood build up in the examination with CDUS.

Mammography: In the midline of the right breast, well-defined moderate fusiform densities with coarse calcifications and microcalcifications in the size of approximately 3x2 cm were observed. A solid mass (BIRADS 4) in the right breast was evaluated as suspicious in terms of malignancy. Tru cut biopsy was performed upon radiologic findings had been evaluated as BIRADS 4, and pathologic results were reported as pilomatrixoma.

A total excision was performed and the patient was discharged on the first postoperative day. Histopathological examination revealed pilomatrixoma (Malharbe tumor) findings.

**Conclusion:** Pilomatrixoma is a rare benign soft tissue neoplasm that originates from the matrix of hair follicles. This lesion was first described by Malherbe and Chenantais in 1880 and was called as calcifying epithelioma. It mostly develops in the head and neck region, less in the trunk and extremities, and very rarely in the breast. A total of 15 papers on benign pilomatrixoma of the breast have been published.

They are usually subcutaneous hard masses that are less than 3 cm. In most cases, the lesion is adhesively attached to the skin, and the underlying mass stretches the skin and forms a nodular appearance. This pathognomonic finding was described by Graham in 1978 as "tent symptom". It occurs as a single lesion, and multiple lesions might be seen among 2% of the cases.

Ultrasonography shows pilomatrixoma as an isoechoic, heterogeneous mass with well-defined, encapsulated, superficial, posterior acoustic shadowing. The multiple bright foci within the mass and capsule might give a hypoechoic image. In our case, the radiologist described a solid mass with micro-lobulations, homogeneously hyperechoic, with micro-calcifications and no evidence of blood build up.

On mammography they appear as pleomorphic coarse, nodular opacities with irregular calcifications (BIRADS IV-V).

In our case, suspected malignancy (BIRADS IV) with well-defined moderate fusiform densities with coarse calcifications and micro-calcifications was observed.

The treatment is surgical excision. Excision with appropriate surgical margins provide complete cure and recurrence is rare. Pilomatrixoma is benign, but it is important to remember that there may be malignant cases. Only one case with malignant pilomatrix breast carcinoma has been reported.

In conclusion, it is difficult to differentiate rarely seen breast localized pilomatrixoma from primary malignant lesions by radiological examination, but it is diagnosed with histopathologic examination. Pilomatrixoma should not be forgotten in the differential diagnosis of malignant lesions in the breast.

**Keywords:** Pilomatrixoma, breast, male

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## PP-0801 [Breast Diseases and Surgery]

# Synchronous Breast and Stomach Cancer-A Case Report

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**Introduction:** Synchronous tumors are difficult in terms of both diagnosis and treatment planning. The tumor that is asymptomatic at the time of diagnosis is likely to be overlooked. As there is no definitive treatment protocols in their treatment, we need to develop a special treatment strategy for the patient. In this case report, a synchronous gastric tumor was detected incidentally during scanning performed in order for staging in a patient with breast tumor.

**Case:** A 56-year-old female patient was admitted due to a mass of 7 mm in the right breast. In the examinations performed via MMG, a hypoechoic lesion with irregular spiculated contour on the right breast at 3 o'clock position 3cm from areola in size of 23x22 mm and a lymph node in the right axilla whose multiple part of the fatty hilus cannot be recognized were detected. Biopsy results performed from LAP on the right axilla and the mass on the breast were reported as invasive ductal

carcinoma, axillary metastasis (Grade: 2, ER: +++ PR: ++ C-erb-b2:-Ki67: 30%). In PET-CT, which was performed for screening purposes of distant organ metastases, intense FDG uptake (SUVmax: 14.2) extending through the malignant process in the 8 cm segment that ends in the lower side of antrum and localized in the small curvature of the stomach corpus and localized second primary tumor in the size of 23x20 mm with increased FDG uptake (SUVmax: 14.2) at 2 o'clock position in the upper inner quadrant of the right breast (SUVmax: 2.9) and several 15 mm diameter LAPs in the right axilla at level 1 and level 2 with minimal FDG uptake (SUVmax: 3.1) were observed. In the endoscopy, a ulcerovegetan mass advancing to the corpus was detected along the small curvature starting right below the cardio-esophageal junction. Histopathological examination revealed a moderate differentiated adenocarcinoma (ER:-, PR:-, C-erb-b2:-in IHC). The oncology council decided to apply neo-adjuvant chemotherapy (6 cycles of FAC) for breast tumor after operating on stomach tumor, and then operate the patient for breast tumor. The patient underwent total gastrectomy + D2 dissection. Post-operative gastric tumor pathology T3N2M0 (3/24 LN) was detected. Neo-adjuvant CT (6 cycles of FAC) was performed for breast tumor. Radical mastectomy was applied to the patient 4 months after gastric surgery. Post-operative breast tumor pathology T2N2M0 (9/13 LN, RCB3) was detected. The patient who did not develop complications after stomach and breast surgery was referred to radiation oncology for radiotherapy treatment for stomach tumor after breast surgery. No recurrence and/or distant metastasis were detected in the 3rd postoperative month imaging of the patient.

**Conclusion:** It should be kept in mind that a second tumor with different origin may be present in patients with malignancy. It should be considered that a synchronous tumor can be detected in systemic physical examination and in all imaging and laboratory tests performed. Given the fact that the stomach tumor in this case had been more aggressive compared to the breast tumor and this would have affected the survival of the patient, treatment with stomach tumor was prioritized.

**Keywords:** Breast tumor, stomach tumor, synchronous tumors

## PP-0802 [Breast Diseases and Surgery]

# Glycogen Rich Clear Cell Carcinoma; Clinical Experience

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**Objective:** Glycogen-rich clear cell carcinoma (GRCCC) is a rare neoplasm of the breast, with an incidence of between 1.4% and 3% of all breast cancers (1). The GRCCC of the breast is defined as a carcinoma in which more than 90% of tumor cells have abundant amounts of clear cytoplasm containing glycogen and is considered as a separate histological variant (2).

**Material and Methods:** Retrospective screening of 4350 patients with breast cancer treated in our department between 2013 and 2018 showed that 5 patients had been diagnosed with GRCCC (0.1%). Clinical and pathological features of the patients were recorded, disease free and total survival periods were calculated.

**Results:** The average age of the patients was 53 (36-65). 4 of the patients (80%) were postmenopausal at the time of the diagnosis. Diagnosis was made by excisional biopsy in 40% of the patients. Mastectomy was applied to 80% of patients and breast conserving surgery was applied to 20% of patients. Sentinel lymph node biopsy (SLNB) was reactive in 2 (40%) of the patients. Two (40%) patients with SLNB positive were treated with axillary dissection. It was determined that 40% of the tumors were in the size of T1, 40% of the tumors were in the size of T2, 60% of the tumors were ER (-), all were PR (-) and 80% of them were cERBB2 score0. 80% of the patients were found to be grade III. The rate of patients receiving hormonotherapy was 20%. During an average follow-up of 13 months, no regional recurrence was seen in any patient and systemic recurrence was observed in 1 patient.

**Conclusion:** GRCCC is a rare tumor of the breast. However, it is the most common breast cancer with clear cell morphology (1). The GRCCC of the breast is defined as a carcinoma in which more than 90% of tumor cells have abundant amounts of clear cytoplasm containing glycogen and is considered as a separate histological variant (2). In 1985, in a study that had included 45 cases, Fisher et. al. reported that compared to commonly seen breast carcinomas the GRCCC of the breast is significantly lower ( $p=0.0038$ ) in terms of disease-free survival. Morphology of the GRCCC of the breast is similar to lung, endometrium, cervix, kidney and salivary gland carcinomas. Metastasis of these tumors should also be kept in mind in differential diagnosis. It has been reported that the prognosis of the GRCCC of the breast is not favorable and may be similar or worse in terms of staging when compared to common invasive ductal carcinomas.

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**Keywords:** Glycogen, cancer, breast cancer

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## PP-0803 [Breast Diseases and Surgery]

# Evaluation of Awareness in Surgeons' Treatment Approach of Granulomatous Mastitis: A Survey Study

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**Objective:** Granulomatous mastitis is defined as a benign pathology of the breast. The debate about its etiology and treatment still continues. While consensus on many diseases has been achieved today, granulomatous mastitis treatment and approach algorithm have not been established. A 15-question questionnaire prepared for general surgeons in our study aimed to reveal the differences in the approach among physicians on granulomatous mastitis.

**Material and Methods:** A multiple-choice and categorical questionnaire consisting of 15 different questions prepared after obtaining the approval of the ethics committee from Ümraniye Training and Research Hospital, University of Health Sciences was directed to general surgery specialists. The collected data were loaded into the SPSS program for statistical evaluation. The results were evaluated according to percentiles.

**Results:** According to the results obtained from thirty participants in the early stage of the planned study for one hundred and fifty general surgery specialists, the number of experts who had between 5 and 10 granulomatous mastitis cases per year was 8 (26.6%) and the number of experts who had less than 5 cases was 16 (53.3%). The first treatment option of all participating specialists was medical. Of the medical treatment methods, the most preferred one was antibiotherapy (85%) and the most common surgical treatment method was abdominal drainage (70%). The majority of participants thought that not enough time is allocated for the discussions on granulomatous mastitis at the national meetings.

**Conclusion:** According to the early results of our study, in granulomatous mastitis patients, surgeons' preliminary plan was medical treatment; antibiotherapy was the first choice in medical treatment and topical steroids were the second one.

**Keywords:** Granulomatous mastitis, survey study, general surgery specialists

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## PP-0804 [Breast Diseases and Surgery]

# Annihilated False Positivity of SLNB in Breast Cancer; A Clinical Evaluation

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From the spot where the tumor is located to the first lymph node where it will be drained, it is called the "sentinel", which means guard, surveillant or messenger. Hypothetically, if the sentinel lymph node does not carry a tumor, it is considered that other lymph nodes in the bed are also tumor free. This eliminates the need for a regional lymphatic dissection, which results in eliminating vascular and neural damage, wound infections and high costs associated with the procedure. SLNB is successfully applied in many centers with low morbidity and over 90% accuracy in the axillary staging as an easily applicable technique in breast surgery. Several studies have shown that about 5-10% of SLNB is an effective and easily performed method with false negative result. In the intraoperative evaluation of LN, the accuracy rates of frozen section and cytologic examination are close to each other and they range from 80% to 99%. There is no or scarcely any false positivity. False negativity is reported as 9-52% for frozen section and 5-70% for cytological examination. For both methods, a significant portion of false negative results (75-90%) depend on micrometastases. In this retrospective study, false positivity of SLNB, which is known to be absent or scarcely present in the literature, was found to be observed in only 1 case. 52 patients who underwent SLNB were retrospectively reviewed. Clinical and radiological records of all patients were evaluated. Of 52 patients, uptake in SLNB was observed in 15 patients, and ALND was performed. In the remaining 37 patients, SLNB was negative. Of 15 patients who had positive SLNB in frozen section examination and were performed ALND, ALND was negative in one patient. It has come to the conclusion that although the number of patients was not enough to give a percentage, it is useful since further studies are required in terms of absence or scarce presence of false positivity of SLNB in literature.

**Keywords:** Breast, SLNB, false positive

## PP-0805 [Breast Diseases and Surgery]

## In the Long Term Follow-up Period of 37 Patients with Early-Stage Breast Cancer and who underwent SLNB with Negative results, Two Patients with Axillary Uptake

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As in the whole world, breast cancer is the most common cancer in our country. Among women, it has a serious rate of about 30% of cancers and 20% of cancer-related deaths. However, early diagnosis and correct treatment can provide long-term disease-free survival. Due to high ALND morbidity and the possibility of a 60-70% negative outcome of axillary in patients with clinically negative axillary in early stage breast cancer, today ALND gives its place to SLNB which is a less invasive procedure and correctly reflects the condition of axillary (about 95%). Sentinel lymph node (SLN) is the first lymph node to receive the lymphatic flow in the axilla. In determining Sentinel Lymph Node (SLN), while only blue dye (Isosulfan blue, methylene blue, patent blue viole), only the nuclear material (usually Tc-99) can be used alone, it is generally accepted that using the combination of two methods increase the success. However, in order to be able to substitute standard I and II level ALND for this method, experience must be gained to achieve an accuracy of over 90% and false negativity rates below 5%. In many studies, recurrence has been shown to be in the range of 0-3%, which significantly supports SLNB, in patients who did not have ALND after negative SLNB. Many studies have also shown that SLNB is an effective and easily performed method with approximately 5-10% of false negative result. In this retrospective study, 52 patients with early stage breast cancer underwent SLNB with isosulfan blue, 37 patients had SLNB (-), and only 2 patients with axillary uptake was observed in their long-term follow-up. Patients with axillary uptake were performed ALND and no loss of survey was observed in the patients. In our retrospective study we would like to emphasize that in patients with early stage breast cancer who are SLNB negative, we should keep it in mind that there might be axillary metastasis/micrometastasis and SLNB false negativity should not be forgotten. Patients' being informed about necessary explanations in this regard shows the importance of patient follow-up and patient compliance. Under these circumstances, SLNB may be an alternative to ALND.

**Keywords:** Axillary, breast, SLNB

## PP-0806 [Breast Diseases and Surgery]

## Assessment on Breast Cancer Awareness

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**Objective:** Since 2000s, 20-25% of female cancers in all our cancer statistics are breast cancer. In order to emphasize the importance of early detection of breast cancer and awareness of breast cancer, since 2004, October has been determined as the breast cancer awareness month all over the world and in our country. We aimed to evaluate the female participants' answers about breast cancer at the end of this active month.

**Material and Methods:** 100 women aged 18 years and older who either visited or were the companions of hospitalized patients in the general surgery department in November, 2017 were asked these questions: their age, who are at risk of breast cancer, whether mammography causes breast cancer, whether birth control pills cause breast cancer, and whether distress causes breast cancer. The questions were asked face to face. The answers were evaluated using the IBM SPSS package program.

**Results:** The average age of the women was 45. For the question "Who are at risk of breast cancer?", 25% answered that women with family histories of breast cancer, 12% answered as women over 40 years old and 25% stated that they did not know. In addition, alcohol consumption, smoking and radiation responses were also given. 34% of the participants thought that mammography was dangerous. 43% stated in their answers that they think using oral contraceptives cause breast cancer. 87% responded that distress causes breast cancer.

**Conclusion:** The best preventive method against breast cancer is early diagnosis. For this reason, raising awareness among women is essential. When this study group is taken as an example, we should increase breast cancer awareness among women. Increased breast cancer awareness will enable patients to apply at an early stage.

**Keywords:** Breast cancer, breast masses, awareness

## PP-0807 [Breast Diseases and Surgery]

# Systemic Steroid Therapy Results of Granulomatous Mastitis: Evaluation of 20 Consecutive Cases

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**Objective:** Granulomatous mastitis is defined as a benign pathology of the breast. The debate on its etiology and treatment still continues. While consensus has been achieved on many diseases today, a consensus on the treatment and approach algorithm of granulomatous mastitis has not been established. The aim of this study was to present the results of patients who had received systemic steroid treatment due to granulomatous mastitis.

**Material and Methods:** The demographic data, radiological results, localization, treatment results of 20 patients who had been followed up for granulomatous mastitis and steroid treatment in the last three years (January 2015-December 2017) were recorded using the hospital data in the General Surgery Policlinic of Ümraniye Training and Research Hospital of Health Sciences University by establishing an individual contact with patients. The results were evaluated according to the average data.

**Results:** The average age of the 20 female patients who were followed up for granulomatous mastitis was 38 (range, 24-48). When the lesions were evaluated in terms of localization, 16 patients (80%) had lesions with left breast localization, 3 patients (15%) had right breast localization and 1 patient had bilateral localization (5%). In terms of complaints, there were seropuric discharge in all patients (n=20, 100%), pain in 14 patients (70%) and palpable mass in 10 patients (50%). Ultrasonographic fluid collection and mass image were found in all of the patients. In Ultrasound-guided biopsy, while 18 patients were diagnosed after initial biopsy; two patients were diagnosed after biopsy repetition. Drainage was performed on patients with abscess formation. Other diagnosed patients were applied antibiotherapy without drainage. Following antibiotherapy, all the patients were started on 60 mg/day of systemic steroid therapy as soon as the diagnosis was finalized. After the steroid treatment, the steroids were reduced at the end of 4th week in the weekly follow-ups according to the response to the disease, and were terminated at the 6th week. Twenty patients who had been followed up showed complete response and no recurrence was detected in any of the patients during the course of the procedure.

**Conclusion:** Today, the discussions on the diagnosis and treatment of granulomatous mastitis still continue. We think that systemic steroid treatment is an effective, feasible, low cost method in granulomatous mastitis.

**Keywords:** Granulomatous mastitis, systemic steroid, treatment results

## PP-0808 [Breast Diseases and Surgery]

# A Rare Breast Tumor: Mucinous Cystadenocarcinoma

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**Introduction:** Primary mucinous cystadenocarcinoma of the breast is extremely rare and histologically characterized by extracellular and/or intracellular mucinous features similar to the mucinous cystadenocarcinomas of the ovary, pancreas, and appendix. In the literature, hormone receptors have been found mostly negative and reported as hormone independent tumors. Here, the patient who had positive hormone receptors in the biopsy material and was planned adjuvant homonotherapy will be presented to discuss the difficulties in diagnosis and treatment planning.

**Case:** A 85-year-old woman was admitted due to a palpable mass in her left breast that she had noticed about a month before. On physical examination, an irregularly circumscribed, rigid, mobile mass 2 cm in diameter was found 3-4 cm away from the areola at 11 o'clock position in the left breast. The lesion that was reported as "BIRADS 5" in ultrasonography and mammography was performed tru-cut bx. Pathologic result was reported as "ER positive invasive breast carcinoma". No other focus was found on staging examinations and the patient was offered surgical treatment. The patient who had refused the surgical treatment was readmitted 2 years after with ulcerous lesion, about 10 cm in diameter, filling almost half the left breast. On physical examination, it was seen that the mass was not fixed on the pectoral muscle and the palpable lymph node was not seen in axillary. Further tests were performed in order for staging and no other focus was detected other than the breast. The patient, who had also been evaluated by medical oncology, was offered surgical treatment primarily and was performed mastectomy. Immunohistochemical analysis of the specimen revealed mucinous cystadenocarcinoma of 9x6, 3x5 cm in size, containing intracellular and extracellular mucin and intraductal carcinoma regions. Despite the negative Mammoglobin and GCDFFP-15 staining, tumor was interpreted as primary breast origin due to the absence of further focus on PET-CT performed for staging and the presence of in-situ foci of ductal carcinoma around the specimen. Despite the ER (+) in the biopsy material, ER and PR receptors were negative

in the specimen. This was related to the heterogeneous internal structure of the tumor. Considering the performance status, the patient who was not planned for chemotherapy was started on adjuvant hormone therapy based on the ER (+) in the biopsy. The patient is at postoperative 4th month and is under disease-free follow-up.

**Conclusion:** Mucinous cystadenocarcinoma tends to be seen among elderly women and has good prognosis. Our case is also elderly. In addition, despite the fact that she was operated two years after the initial diagnosis and no distant metastasis was detected might be consistent with good prognosis. Though hormone receptors are reported as negative in most cases in the literature, hormone therapy was planned for our patient because of the presence of ER positivity in her biopsy specimen. Mucinous cystadenocarcinoma, a rare tumor of the breast, has been discussed in terms of both the difficulties of diagnosis and the stages of treatment planning and has been presented in order to contribute to the literature.

**Keywords:** Cystadenocarcinoma, breast cancer, mucinosis

## PP-0810 [Breast Diseases and Surgery]

# Encapsulated Papillary Breast Carcinoma; A Truly Innocent Tumor?

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**Introduction:** Encapsulated papillary carcinoma (EPC) is a rare breast carcinoma considered to be a variant of invasive ductal carcinoma. In studies conducted up to now, these tumors have been presented as benign behavior with excellent prognosis. In our study, we aimed to investigate the diagnosis and treatment approach of an EPC case with an aggressive course.

**Case:** A 68-year-old female patient was admitted to the center with a newly developed mass on the left breast 10 months before and was recommended follow-up upon a negative true cut biopsy result and imaging. The patient was admitted to our department due to the expansion of the mass in left breast and the newly formed mass on the sternum. On the physical examination of the patient, an 8 × 7 cm mobile mass with moderate rigidity filling the left breast inner quadrant and a 7 \* 4 cm sized rigid mass in the sternum were palpated while the axilla was negative. In the mammography and advanced magnetic resonance imaging, a cystic mass with a 7.5 \* 6 cm solid component in the left breast and a second mass associated with the first one with a necrotic character covering the majority of the sternum were detected. A large excision was made to the mass in the left breast upon the detection of a papillary tumor whose invasive character could not be determined in the biopsy performed on the left breast. The patient was discharged without any problems on the second postoperative day. Histopathological examination revealed an encapsulated papillary carcinoma with a solid component of 3 \* 3 \* 2 cm. Luminal A pattern was observed in the immunohistochemical evaluation of the mass with lymphovascular invasion. The patient was directed to oncologic treatment.

There is not sufficient evidence on papillary carcinoma of the breast in the literature because of its rare occurrence and it is described as a lesion with benign behavior in the diagnosis and treatment. EPK is a tumor that accounts for 0.5-1% of all breast cancers and is usually seen in postmenopausal women. There is a thin capsule that separates normal breast tissue from this tumor that originates from the mammary duct epithelium. These patients are admitted with large cystic masses in the breast. Surgical excision is recommended in the presence of atypia on core biopsy, presence of high-risk lesion, or radiology-histology incompatibility. Although our case exhibits typical symptoms that are mentioned above, the disease could only be detected in later stages due to the difficulty of differential diagnosis.

The treatment procedure includes lumpectomy or mastectomy (with sentinel lymph node/axillary dissection) followed by adjuvant radiotherapy +/-hormone therapy in appropriate cases. Although the 10-year survival rates are above 95%, there is a risk of recurrence and metastasis, especially in high-grade tumors. However, it should not be forgotten that aggressive behavior, independent from the tumor grade, may be seen in advanced stage cases that are detected late as in our case.

**Conclusion:** Papillary carcinoma should be kept in mind when imaging and biopsy results are inconsistent in elderly women and advanced examination and excisional biopsy of the mass should be kept in mind as an alternative.

**Keywords:** Encapsulated papillary cancer, breast, prognosis

## PP-0811 [Breast Diseases and Surgery]

# The Effect of Micropapillary Component Ratio of Invasive Micropapillary Breast Carcinoma Cases on the Prognosis

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**Objective:** Invasive micropapillary carcinoma of the breast (IMPC) is a rare, aggressive variant of invasive ductal carcinoma. The prognostic significance of the ratio of micropapillary component (MPC) in these tumors is controversial. In this study, we aimed to investigate the effect of MPC ratio on the prognosis of these patients.

**Material and Methods:** The data of 47 patients with IMPC was reviewed retrospectively. The patients were divided into two groups: MPC-r,  $\leq 75\%$  (Group 1) and  $>75\%$  (Group 2). The demographic characteristics, tumor histopathologic features and survival rates of the patients were compared.

**Results:** Demographic characteristics were similar between the two groups. There was no significant difference in tumor diameter, lymph node metastasis, lymphovascular invasion, histological grade, multicentricity, regional recurrence, distant metastasis and overall survival.

In the WHO classification of 2003, the IMPC was described as a subtype of ductal carcinoma of the breast but not a percentage of the MPC ratio was given because of the very rare occurrence of its pure form. Although later studies have suggested that generally accepted MPC's being over 50% is necessary in order for diagnosis, it is said that rates of 25% or even 10% may be sufficient for the definition of these tumors.

Previous studies with IMPC have shown that these tumors are usually associated with several prognostic factors including higher TNM stage, lymph node metastasis and lymphovascular invasion (LVI). In our study, the prognostic parameters of breast cancer in general were compared according to the MPC ratios but no relationship was found.

**Conclusion:** In IMPC patients, although positive receptor characteristics were associated with high MPC-r, recurrence and survival rates were similar at a section level of 75% for different MPC-r.

**Keywords:** Invasive micropapillary carcinoma, breast cancer, micropapillary component

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## PP-0812 [Breast Diseases and Surgery]

# Malignant Melanoma Metastasis of the Breast

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**Introduction:** Metastatic tumors of the breast are rare and reported in the literature as 1-5%. Malignant melanoma (MM), lymphoma, lung cancer, soft tissue sarcomas, kidney, ovarium and gastrointestinal system tumors are the most common metastases to the breast. Metastasis to the breast usually occurs in the presence of widespread disease and poor prognosis. We would like to present a case of MM with breast metastasis in the context of diagnosis and treatment approaches since we do not see frequently this in our surgical practice.

**Case:** A 50-year-old female patient. In 2014, nevus excision was performed on the lower lip and her pathological examination was reported as melanocytic nevus. Submental lymph node (LN) was detected in the patient who complained of a swelling under the jaw in 2016. The patient underwent wide excision and functional neck dissection surgery when the biopsy result had been reported as MM metastasis. Pathologic examination revealed pT2a pN2b that shows a common insitu component developed on the intradermal nevus, and a lesion compatible with MM, which was positively stained with melanoma with the thickness of 1.1 mm. Metastases were detected in 3 of 44 LN removed. After 1 year of 6 cycles of DTIC-cisplatin combined chemotherapy, ultrasonography (USG) revealed a BIRADS-4 mass of 10x8.5 mm at a distance of 3 cm to the areola at 12 o'clock position of the right breast. Mammographically, the mass was defined as hyperdense nodular opacity with well-circumscribed borders. It was reported as MM metastasis upon tru-cut biopsy results. Segmental mastectomy and sentinel LN biopsy were performed. A definitive opinion could not be reported about the LNs obtained from peroperative frozen screening and was directed to the paraffin examination. A 2-sentinel LN was subsequently reported as MM metastasis. No additional intervention was performed. Oral temozolamide was initiated with the recommendation of the medical oncology department. The patient is still on follow-up and treatment in her postoperative 6th month.

**Conclusion:** The combination of MM and the breast can be seen in different forms. Primary melanoma of the breast or breast skin melanomas as well as cases originating from other organs such as the eyes or the skin metastatic to the breast should be kept in mind. Mammography and USG assessment of both breasts and axillary lesions, multicentricity if present, identification of axillary involvement and confirmation of the diagnosis via cytologic (with fine needle biopsy or tru-cut biopsy) tests



should be performed in cases with MM diagnosis and with detected masses in the breast. Presence of bilateral metastases in the breast should suggest the metastatic multi-organ disease and therapeutic processes should be planned in this direction. In non-multicentric cases, although quadrantectomy is the most appropriate option, simple mastectomy can also be performed. Clinically and pathologically, axillary dissection is controversial if axillary involvement is positive. Breast parenchymal metastases of cutaneous MMs are rare and are a sign of disseminated disease and poor prognosis. Aggressive surgery should be avoided with brief survival times kept in mind. The effectiveness of chemotherapy is controversial and new studies will be pathfinders.

**Keywords:** Malignant melanoma, breast, metastasis

## PP-0813 [Breast Diseases and Surgery]

# The Importance of Stereotactic Marking for Surgical Excision in Microcalcific Foci in the Breast

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**Objective:** Breast cancer is the most common type of cancer among women. Thanks to routine breast screenings and early diagnosis and multidisciplinary treatment approaches, survival rates have increased significantly. Mammography is an effective imaging method especially for the detection of possible malignant lesions that can not be palpated and cannot be visualized by ultrasonography in appropriate patients. Excisional biopsy after marking the current foci with wire is a very useful method for identifying possible malignancies. In this retrospective study, it is aimed to present surgical excision and histopathological results after wire marking accompanied by mammography in cases with suspicious non-palpable breast lesions.

**Material and Methods:** Between January 2010 and July 2016, the files of 77 patients with suspicious lesions revealed on mammograms and who had undergone surgical excision in Selçuk University School of Medicine, Department of General Surgery after wire marking were examined retrospectively.

**Results:** The average age of the patients was 49.6 (27-75) years. The procedure was performed under local anesthesia and sedation. Patients were planned to have oral intake in post-operative 4-6 hours and be discharged in 8-12 hours. After pathologic examination upon excision, the results were evaluated as malignant in 24 patients; ductal carcinoma in situ in 17 patients, invasive carcinoma in 6 patients and invasive ductal carcinoma in 1 patient. Of the patients with malignancy, 13 were marked for microcalcification, 3 for hypoechoic lesion, 2 for lesion with spiculated contour, and 6 for suspicious mass. In these patients, 8 patients with sentinel lymph node biopsy (SLNB) negative had mastectomy and 16 patients with SLNB positive had modified radical mastectomy. Of the patients who were pathologically benign, 21 were referred to our department for further examination. Patients were followed for an average of 3.8 (1-6) years through imaging performed at appropriate intervals. Patients did not have any lesions or malignancies that required repeat biopsy or advanced imaging in patients.

**Conclusion:** Today, breast cancer is one of the cancers with the opportunity of early detection via screening programs. It is extremely important to perform pathologic examination after FNAB, Tru-Cut biopsy or excisional biopsy from suspected lesions during scanning. It will be an extremely important and correct approach to determine the follow-up, diagnosis and treatment management according to the result of surgical excision after wire marking and the result of the pathology, especially in cases with microcalcification foci which cannot be determined in USG and that are not palpable.

**Keywords:** Stereotactic marking, breast, microcalcification, modified radical mastectomy

## PP-0814 [Breast Diseases and Surgery]

# Our Results of Oncoplasty Surgery in Breast Cancer

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**Objective:** Today, breast cancer is still observed among one in 8-10 women in a lifetime. In the recent past, breast cancer treatment has developed via rapid advancement in medical and radiation oncology and surgical treatment options that have begun to change accordingly. In this study, we would like to give information about the results of oncoplastic methods that we have performed in our hospital.

**Material and Methods:** Between January 2016 and December 2016, we performed oncoplasty surgery techniques in 17 pa-

tients whom we operated but not performed mastectomy on. The choice of method was decided according to the NAC (nipple areola complex) involvement, tumor location, tumor size and ptosis status of the breast. Demographic and tumor characteristics of the subjects were examined.

**Results:** The average age of the patients is 46,5. The tumors (85%) were detected as T1-T2 in most of the cases. Oncoplastic techniques were periareolar mammoplasty, inferior pedicle mammoplasty, batwing mammoplasty, lateral mammoplasty, medial mammoplasty, vertical mammoplasty, inverted-T mammoplasty. No major complication developed in any of our patients. 88% of our patients were satisfied with the cosmetic result.

**Conclusion:** Today, oncoplasty surgery in appropriate cases with breast cancer gives favorable results and it is likely that it will take the place of breast-conserving surgery in the near future.

**Keywords:** Oncoplastic, breast cancer, mammoplasty

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## PP-0815 [Breast Diseases and Surgery]

# Tumor Characteristics and Treatment Methods in Elderly Breast Cancer Patients

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**Objective:** To determine the tumor characteristics, the surgical method, local recurrence and distant metastasis rates in women aged 70 years and older with breast cancer.

**Material and Methods:** The histological type, grade, size, hormone receptors, c-erbB2 receptor, axillary lymph node involvement of the tumors and the operation methods of the female patients who were operated between the dates of 30/04/2007-30/04/2017 in İzmir Tepecik Training and Research Hospital, General Surgery Department Unit C due to breast cancer were examined. Local recurrence and distant metastasis were also investigated.

**Results:** A total of 68 female patients who had undergone surgery were examined. The average age was 75.3±5.3 (min-max 70-95). When the patients were examined according to the type of operation performed, it was determined that they had been frequently performed breast conserving surgery (BCS) + axillary dissection and the most common pathological diagnosis was invasive ductal carcinoma.

When examined according to their receptors, 51 (75%) patients were found to be estrogen receptor positive (ER) and 53 (78%) patients were found to be c-erbB2 receptor negative. Only 7 of the patients (10%) had tumor grade 1 and the remaining patients had tumor grade 2 and 3. The average tumor size was 3±1,6 cm (min-max 0,1-8,5 cm) and 27 (40%) patients had axillary metastatic lymph nodes. 4 (6%) patients were found to have local recurrence and distant metastases was found in 9 (13%) patients.

**Conclusion:** In the literature, there is no clear treatment approach for elderly patients with breast cancer. Due to advanced age and comorbidities, anesthesia and surgical units abstain from major interventions. Although the number of our patients is not sufficient, local recurrence rates and distant metastasis rates are consistent with the literature. For this reason, we think that breast-conserving methods can be applied via patients' participation in decision making process in elderly patients with breast cancer.

Note: It was accepted as a poster presentation for the 14th National Breast Disease Congress, 19-2 October 2017.

**Keywords:** Surgical treatment, breast cancer, breast cancer among the elderly

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## PP-0816 [Breast Diseases and Surgery]

# Rare Tumor of the Breast; Can liposarcoma be treated with Oncoplasty?

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**Introduction:** The sarcomas of the breast constitute less than 1% of all malignant breast tumors. Liposarcomas account for about 0.3% of the sarcomas in the breast. The majority of liposarcomas in the breast are seen over the age of fifty, but they can

also be seen among the young as well. In this case, we have aimed to present a 59 year-old female patient who was operated with the pre-diagnosis of liposarcoma due to a growing swelling in the right breast with her histopathological and radiological findings.

**Case:** A 59-year-old female patient was admitted to our general surgery department with a swelling in the right breast that was asymmetrically larger in size compared to the other breast. In the examination, the right breast was about twice the size of the other, the left breast was normal and in the the right breast, soft, painless, oval and moving mass displaying lateral localization was detected. Bilateral axillary lymph nodes were not palpable. There was no history of exogenous estrogen use and no breast cancer history in the family. In the ultrasound, similar to fat solid lesion whose AP size was measured 130 mm in size in the deepest region completely covering the upper and outer quadrants of the right breast was monitored.

In the mammography, mass lesion whose mediolateral and anteroposterior dimension measured as 20 cm in fat density, covering the entire upper middle and outer quadrant of the right breast, and that shows capsule structure with undistinguished border of the axillary was detected.

The mass was excised with firm surgical margins from the upper right quadrant of the breast by removing the skin via crescent incision, biopsy was taken from the suspected retroareolar ductal dilate region and the formed cavity was approximated by forming an intraglandular flap.

The patient did not have any problems in the postoperative period and was discharged without any problems with routine follow-up.

No postoperative recurrence was observed in 3 months, 6 months and 1 year controls.

Pathology: Well-differentiated liposarcoma, GRADE 1, ductal biopsy result was ductal epithelium mild hyperplasia.

**Discussion:** Mesenchymal lesions are rare in cases who were applied excisional biopsy due to mammographic mass diagnosis.

Although liposarcomas are the most common soft tissue tumors, their primary involvement in the breast tissue is rare.

The average diameter of the liposarcomas seen in the breast is 8 cm; but cases that reach much larger dimensions such as ours have also been reported.

The treatment of primary breast liposarcoma is surgery. Today, it is accepted that wide local excision of tumor-free surgical margins is also sufficient.

Since liposarcomas rarely metastasize to the axillary lymph nodes, Axillary dissection is not recommended. The majority of metastases are hematogenous and most commonly metastasis to the lung is observed.

Radiotherapy treatment can be added in cases with high grade close surgical margin. Radiotherapy is recommended especially after breast conserving surgeries.

Chemotherapy can be considered in metastatic cases.

**Conclusion:** Liposarcomas are rare tumors of the breast. Because the methodology and prognosis differ, the differential diagnosis should be performed considering other breast tumors and a surgical plan should be provided by presenting the oncoplastic breast conserving surgery option to the suitable patient.

**Keywords:** Liposarcoma, breast, breast sarcoma

## PP-0817 [Breast Diseases and Surgery]

# Radiation-Induced Breast Angiosarcoma Developed After Adjuvant Radiotherapy of Breast Cancer

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**Introduction:** Angiosarcoma is a highly malignant disease with vascular endothelium origin. Radiation-associated angiosarcoma is a rare and late complication of breast cancer after radiotherapy. We will share our experience with a case of secondary angiosarcoma of the breast in our study.

**Case:** A 67-year-old female patient who had undergone tru-cut biopsy at our center in 2011 due to a mass in the left breast was reported as invasive ductal carcinoma and underwent excision and axillary dissection under wire guidance after 6 courses of neoadjuvant chemotherapy. In the postoperative period, the patient received radiotherapy, anastrozole treatment since she was hormone receptor positive and trastuzumab therapy because of c-erbB2 positivity. Then, in 2013, she was performed total thyroidectomy due to thyroid nodules at another center and patient's pathology was reported as Papillary Ca. Radioactive iodine treatment was performed after thyroidectomy. During the usual postoperative follow-up of the patient, a dermatology outpa-

tient consultation was requested in January 2016 due to a lesion adjacent to the keloidal scar tissue on the left breast skin. The result of the punch biopsy performed through the erythematous infiltrate plaques was angiosarcoma. A 16x8mm solid mass was found in the imaging of the left breast. Then, skin reconstruction with left mastectomy and split thickness skin graft was applied to the patient in order to include the breast skin extensively. There was no evidence of recurrence or a new primary involvement at the 18-month follow-up of the patient.

**Conclusion:** The interval time in the radiation induced secondary breast angiosarcomas may vary from 1 to 26 years. The cases are usually presented with breast mass and purpuric rash on the breast skin. Total mastectomy is recommended to achieve extensive negative margins in surgical treatment. Although antiangiogenic treatments in adjuvant treatment are promising, their prognosis is not good. Especially in the follow-up of the patients receiving radiotherapy, symptoms that can be observed in the skin or residual breast tissue, similar to those found in our patient, physicians should be suspicious of radiation-related angiosarcoma and should apply necessary tests and treatments in this respect.

**Keywords:** Angiosarcoma, radiation, breast

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## PP-0819 [Breast Diseases and Surgery]

# Malignant Solitary Fibrous Tumor of the Breast: A Case Report

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**Introduction:** Solitary fibrous tumors (SFT) are soft tissue sarcomas with mesenchymal origin. These tumors may be malignant or benign. Malignant SFT may occur in a large proportion of soft tissues due to its origin from vascular pericytes. SFT cases are frequently with pleural and pulmonary origins. However, SFT cases that are formed in the breast have also been reported in the literature even though they are limited in number. In this case report, we report a case of malignant solitary fibrous tumor of the breast which is a rare neoplasm in a 53-year-old female patient and the treatment plan.

**Case:** A 53-year-old female patient who had previously undergone a modified radical mastectomy upon the detection of lobular carcinoma in the left breast was admitted to our hospital because of a painless palpable mass on the right side. Ultrasonography revealed a 20x15 mm echogenic lesion with undistinguished margins showing central vascularization in the right breast; pathological lymph nodes were not detected in axillary. Mammography was assessed in the BI-RADS 2 category. Thereupon, an excisional biopsy was performed on the patient, taking the patient's cancer history into consideration. Pathologic examination revealed malignant solitary fibrous tumor with lipomatous component. In addition, immunohistochemical (IHC) examination showed that tumor cells stained positive for CD34. In addition, the surgical margin of the tumor was positive. Upon the results and the patient's request, simple mastectomy was performed. The pathology of the material was reported as a malignant solitary fibrous tumor, a type of spindle cell neoplasms. Pathological lymph nodes were not found in the material other than reactive lymph nodes. No pathologic 18-FDG uptake was observed in the control PET/CT.

**Conclusion:** SFT is an uncommon spindle-cell neoplasm with mesenchymal origin. Although SFTs are often seen in pleura, about 50-70% occur in the extrathoracic region. 10-15% of SFTs recur or metastasize. Expression of CD34, CD99, Bcl2, and vimentin as IHC are the markers of SFT. CD34 positivity has been reported in 77% of benign SFTs and in almost entire malignant SFTs. The physical examination findings of SFT of the breast usually depend on the tumor size. It often appears as a painless mass. Radiological symptoms are nonspecific. USG, CT and MRI can be used in the scan. These lesions should be clearly distinguished from fibroadenoma and phyllodes tumors. Radiological examination alone is not sufficient to distinguish solitary fibrous tumors from other breast cancers. Histological evaluation and IHC features are very important for differential and definitive diagnosis. Although the standard treatment method for SFT is not yet defined, today the most preferred treatment method is wide surgical excision. Radiotherapy, chemotherapy and arterial embolization are among other treatment options. Although the disease has usually a non-aggressive clinical course, the possibility of local recurrence and possible metastasis require strict follow-up, especially if atypical features are present. Despite all this, there are many issues that need to be clarified regarding the malignant solitary fibrous tumor, which is one of the rare tumors of the breast. It is inevitable to compare treatment options with extensive clinical trials.

**Keywords:** Spindle-cell neoplasm, breast cancer, solitary fibrous tumor, soft tissue sarcoma

## PP-0820 [Breast Diseases and Surgery]

## The Impact of Surgical Methods on the Breast Cancer Patients' Quality of Life

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**Objective:** Breast cancer is the most common cancer in women, and it affects sexuality, psychosocial life and the quality of life of the patients. In this study, we aimed to compare postoperative psychosocial, sexual life and general quality of life of the patients who underwent breast conserving surgery (BCS) and modified radical mastectomy (MRM) in our department.

**Material and Methods:** The study included patients who had been operated between January 2012 and January 2014 in our department due to breast cancer diagnosis. Patients who did not want to participate in the study or who could not be reached, patients who could not give answers to questionnaire due to conditions related to intelligence or Training, patients who received neoadjuvant chemotherapy and who needed radiotherapy after radical mastectomy and ASA3 and 4 patients were excluded. The quality of life of the patients was assessed using the EORTC QLQ C30 and BR23 forms six months after the completion of patients' treatment procedures (surgery, radiotherapy, chemotherapy).

**Results:** During our study, a total of 112 patients were operated in our department due to breast cancer. Of these, 16 were excluded due to exclusion criteria and a total of 96 patients were included in the evaluation. All of the patients were female and the average age was 50.5 (SD 11.4). According to the EORTC QLQ30 questionnaire, scores of the MRM group were significantly higher in terms of six functional scales (physical function, role function, cognitive function, mood, social status, general well-being). When the symptom scales are examined, no statistical significance was detected in terms of nausea, vomiting, constipation and diarrhea. However, scores of the MRM group were significantly higher in terms of dyspnoea, loss of appetite, sleep disorder, pain and fatigue. EORTC QLQ BR 23 questionnaire showed no significant difference between the two groups in terms of sexual satisfaction, whereas score of MRM group was significantly higher in terms of body image, sexual life and future expectancy. When the symptom scales were examined, there was no difference between the groups in terms of hair loss; whereas the scores were significantly higher in patients who underwent MRM in terms of side effects, breast symptoms, and arm symptoms.

**Conclusion:** Due to the positive effects on the patients' quality of life, we believe that appropriate planning of MKC will increase the quality of life of the patient.

**Keywords:** Breast tumors, quality of life, mastectomy

## PP-0821 [Breast Diseases and Surgery]

## Can "Axillary Mucinous Adenocarcinoma Metastasis" be the Occult Breast Cancer?

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**Introduction:** In occult breast cancers, main symptom is the metastasis to axillary lymph nodes or other parts of the body, and primary lesions can not be identified by breast palpation or imaging. It constitutes between 0,1% and 0,8% of breast cancer cases in women. Since 90% of metastatic axillary lymph nodes originate from breast cancer, tumors isolated from breast cancer are rare. In this case, the occult breast cancer whose left axillary lymphadenopathy (LAP) biopsy was assessed as malignant adenocarcinoma metastasis is presented.

**Case:** A 42-year-old female patient presented with a palpable mass under her left arm. In the left axilla, a mobile multilobule mass of 2.5x2 cm was palpated. On ultrasonography, in the left axillary region two thick cortexed lymph nodes, the larger one with the size of 24x15 mm, with echogenic hiluses pushed aside; in mammography, lymph node of 34x25 mm in size and whose fatty hilus could not be observed; in PET-CT no pathologic FDG involvement except for lymphadenopathy LAP of 2.6 cm (suv: 3.1) in the left axillary were detected. No pathological findings were found in thorax CT and breast MRI.

In the histopathology of axillary tru-cut biopsy, it was reported as a metastasis of mucinous adenocarcinoma. Upper endoscopy-colonoscopy was normal. Immunohistochemical examination showed negative staining with estrogen, progesterone, TTF 1, CD X2 in tumor cells; Positive with CK 7 and CK 20; Weak staining was observed with GCDFP 15 and Mamoglobin.

After the patient underwent 3 cycles of CA, 12 weeks of paclitaxel + herceptin chemotherapy, the breast MRI was normal. Level 1-2 lymph node dissection was performed on the patient. Pathology revealed mucinous islets, but no epithelial cells. Postoperative entire breast and axillary radiotherapy (RT) was planned for the patient.

**Conclusion:** Breast cancers sometimes cannot be detected by anamnesis, physical examination, laboratory findings and imaging methods, but may only appear as isolated axillary adenopathy. Immunohistochemical examination with different biomarkers for the detection of the primary is useful in differential diagnosis.

In the case whose axillary metastasis histopathology was evaluated as mucinous adenocarcinoma, the cytokeratin CK 20 with CK7 positivity provides the possibility of primary pancreatic cancer and mucinous ovarian cancer; GCDFP-15 positivity which is an apocrine differentiation marker, provides the possibility of 62-77% breast cancer, salivary gland tumors, skin and adnexal tumors; 10% prostate cancer <10% lung, stomach, ovarian and genitourinary cancers. Although negative androgen receptors decrease the possibility of breast and gynecological pathologies, weak GCDFP-15 positivity suggests breast cancer. That only mucinous islet cells had remained through breast-targeted chemotherapy showed that response to the treatment was received. With all of these findings, the patient was accepted as occult breast Ca and RT was planned and monitoring was performed.

Upon the evaluation of the treatment response to imaging and histopathological data, evaluation, the patient was accepted as Occult breast Ca with clinical assessment. In cases where the available data do not fully support breast cancer, the clinical approach and response to the patient treatment is important and should be kept in mind.

**Keywords:** Occult, breast, cancer, adenocarcinoma, mucinosis

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## PP-0822 [Breast Diseases and Surgery]

# Should there be an Upper Age Limit in Breast Cancer Screening?

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**Objective:** Increased living standards, widespread screening tests, and improved treatment options expanded the human life span all around the world. As the life span of the people expands, elderly men and women have begun to make up a considerable part of society. In elderly people, breast cancer occurs more frequently. In Turkey, breast cancer screening is recommended up to 69 years. In patients over 69 years of age there is no consensus about screening, and these patients usually get breast cancer diagnosis in late periods. In this study, we tried to emphasize why the screening program should cover 69 years and older.

**Material and Methods:** The data of 156 patients who had been operated due to breast cancer during 2010-2017 within the province of Ordu were retrospectively reviewed. These patients were divided into two groups, as aged  $\leq 69$  years and  $\geq 70$  years. The ratios of both groups in total breast cancer patients who underwent surgery and their breast cancer stages were evaluated.

**Results:** Of the 156 patients included in the study, 153 were female and 3 were male. Their average age was 58.24 (31-94) years. 122 patients were  $\leq 69$  years old and 34 were  $\geq 70$  years old. 21.8% of the patients were over 70 years old. When the breast cancer stages of the patients with available data were evaluated, the stage was more advanced in the  $\leq 70$  age group than the  $\geq 69$  age group.

**Discussion:** Breast cancer is the most common type of cancer among women with the percentage of 23%. Approximately 40% of breast cancers are diagnosed at age 65 and over. Early detection of cancer with breast cancer screening programs will increase overall survival and reduce mortality. No matter how advanced the chronological age of breast cancer patients, an important part of them die from breast cancer. Therefore, elderly patients should also be screened and receive early diagnosis in breast cancer.

**Conclusion:** An important part of breast cancer cases are 70 years old and over. Since these patients are not included in the screening program, they are diagnosed at a later stage. Instead of setting an upper age limit for breast cancer screening, screening should continue for people whose overall health status is good and whose life expectancy is longer than 5 years.

**Keywords:** Old age, breast cancer, screening

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## PP-0823 [Breast Diseases and Surgery]

# Evaluating the Accuracy of Sentinel Lymph Node Biopsy Using Methyl Blue Only in Breast Cancer

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**Objective:** To prove that when the sentinel lymph node biopsy technique is performed accurately, use of methylene blue only is sufficient.

**Material and Methods:** Twenty-two female patients with clinically non-palpable and radiologically pathologic lymph nodes in the axillary were included in the study between the years 2015 and 2017. Operations were performed using periareolar and peritumoral 2% methylene blue. After the injection of methylene blue, all the patients were wrapped and massaged with warm compress for 5 minutes. The frozen technique was used during the operation. The same lymph nodes were then compared with pathology sections.

**Results:** Axillary curettage was performed on 7 patients upon receiving malignant result from frozen. As the report of the other patients was benign, axillary was not touched. Of the patients who were performed axillary curettage, 4 developed seroma and 1 patient developed biloma. All the patients' material that had been examined with frozen were reexamined and it was determined that they had the same perioperative diagnosis.

**Conclusion:** We support that the procedures performed with methylene blue only are sufficient for sentinel lymph node biopsy when the procedures are performed by experienced surgeons and pathologists in accordance with its technique. When the number of patients increase, we are convinced that there will be close results.

**Keywords:** Axillary curettage, methylene blue, sentinel lymph node biopsy

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## PP-0824 [Breast Diseases and Surgery]

# The Importance of Surgery in Phyllodes Tumors of the Breast

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**Objective:** In the light of the literature, to investigate the treatment and recurrence status of our patients who were diagnosed with phyllodes tumors.

**Material and Methods:** Female patients who had been operated due to fibroepithelial lesion diagnosis between January 2015 and January 2017 at our hospital were included in the study. The data was reviewed retrospectively using patients' files. Patients were evaluated in terms of the surgery performed according to their pathology results, whether they received chemotherapy and radiotherapy, size of the mass, recurrence, survival and demographic data.

**Results:** A total of 25 patients were evaluated. The average age of all patients was  $36,6 \pm 11,8$  years and the median was 39 years. In the 14 (56%) of the patients, tumors were localized in the left breast. The average size of the pathologic tumor was  $6,3 \pm 3,3$  cm. It was detected that 8 patients had malignant phyllodes tumors, 3 had borderline phyllodes tumors, 7 had benign phyllodes tumor, and 7 had fibroadenoma. 8 patients with malignant phyllodes tumor underwent mastectomy, the others were performed wide local excision (WLE). One of the 7 patients who had undergone WLE was performed mastectomy due to margin positive result. One of the two patients with less than 1 cm margin was applied radiotherapy (RT) and the other one had chemotherapy (CT) and radiotherapy. These two patients had recurrence and the died. All of the other 17 patients except one (had mastectomy since the mass completely covered the breast) were treated with WLE. In our study, the 5-year survival rate for benign/borderline phyllodes tumors was 93,8% and for malignant phyllodes tumors it was 70%. The recurrence rate in malignant phyllodes tumors was 25%.

**Conclusion:** There are various opinions for malignant phyllodes tumor treatment. However, surgical margin negativity stands out. It is still controversial whether to add RT and CT.

**Keywords:** Malignant phyllodes tumor, recurrence, treatment

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## PP-0825 [Breast Diseases and Surgery]

# In Idiopathic Granulomatous Mastitis Patients Who are Unresponsive to Medical Treatment, Resection Performed Until Seeing Macroscopic Normal Breast Tissue Reduces the Rate of Recurrence

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**Objective:** Idiopathic granulomatous mastitis (IGM) is a rare chronic inflammatory disease and its etiology has not been completely clarified. IGM especially affects reproductively active women aged 17-42 years. Although IGM is a benign disease, it affects patients' quality of life negatively. IGM therapy is still controversial and there is no accepted common treatment. The search for treatment methods with the least recurrence rate continues. In our study, it was aimed to evaluate the result obtained after the resection made until the macroscopic normal breast tissue was seen in IGM patients who did not respond to medical treatment.

**Material and Methods:** The study was retrospectively performed. Patient data were taken from patient files and electronic records in accordance with the protocol established for the study. The demographic and clinical characteristics of the patients, physical examination results, symptoms, localization of the lesions, diagnosis, treatment and recurrence were planned. Patients who were diagnosed with IGM histopathologically were included in the study. Males, IGM patients with breast cancer and non-IGM patients were excluded from the study.

**Results:** 62 patients were included in the study. The average age of the patients was  $38.3 \pm 10.2$  (16-64). The most common symptom was the mass in 80% of the patients. It was most frequently found in the right upper quadrant by 25%. Bilaterality rate was 4%. The average follow-up time was  $27.7 \pm 17.2$  (2-85) months. Surgical treatment was performed on all the patients. Performing wide excision or segmentectomy until seeing macroscopically normal breast tissue was identified as the standard treatment. Recurrence was observed in two of the patients (3%). The average recurrence time was determined as 5 months. After recurrence, one patient was treated with wide excision and one patient with abscess drainage only.

**Conclusion:** In IGM treatment non-responsive to medical treatment, the recurrence rates are in minute amount after performing resections until macroscopically normal breast tissue is seen. In addition, the level of satisfaction of patients is very high. Cosmetic problems after the resections performed in breasts with small volume may be seen as a disadvantage, but the preoperative informing of the patients and the explaining that the possible cosmetic problems can be fixed reduces the postoperative worries. There is still a need for large scale prospective studies comparing medical and surgical treatments in this regard.

**Keywords:** Idiopathic granulomatous mastitis, surgery, recurrence

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## PP-0826 [Breast Diseases and Surgery]

# Long-term Results of Steroid Treatment in Idiopathic Granulomatous Mastitis

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**Objective:** Granulomatous lobular mastitis (GLM) is a rare, chronic inflammatory disease of the breast. Although its etiology is unknown, the autoimmune mechanism is suspicious. There are two forms of GLM as idiopathic granulomatous mastitis (IGM) and specific granulomatous mastitis. Clinically and radiologically, it may be difficult to distinguish breast cancer and breast infections. The appropriate treatment model for IGM is not clear, but surgical and medical treatments are recommended.

**Material and Methods:** 122 cases with histopathological diagnosis of IGM between January 2007 and June 2016 were reviewed retrospectively. Patient characteristics such as age, clinical findings, radiological imaging, diagnostic method, treatment type and recurrence status were evaluated.

**Results:** The median age of the patients was 38 (22-69) years. The complaints of the patients are as follows; Sixty-three patients (51.63%) had breast masses, eight (8.55%) had rash and edema, and 51 patients (41.80%) had fistula formation on the breast skin and discharge. However, in many patients, three of complaints were found together in different forms. Ultrasonography of the breast was performed in all patients (100%), 58 (47.54%) had mammography and 16 (13.11%) were performed magnetic resonance imaging. Twenty patients (16.39%) who were diagnosed with IGM were treated with wide or local surgical excision. Ninety-four patients (77.04%) had steroid treatment. The average follow-up period after treatment was 66 months (5-118). Five patients (25%) who had been treated surgically developed recurrence at the sixth month and steroid therapy was started. Of the 94 patients treated, only nine (9,5%) experienced recurrence.

**Conclusion:** IGM can be confused clinically and radiologically with breast carcinoma. Patients can be adversely affected, especially young women, due to diagnosis difficulties, treatment failure and repetition. Histopathological examination should be the gold standard to confirm the diagnosis.

**Keywords:** Idiopathic granulomatous mastitis, steroid therapy, recurrence



## PP-0827 [Breast Diseases and Surgery]

## Giant Juvenile Fibroadenoma

**Mehmet Torun, Zehra Ünal Özdemir***Department of General Surgery, Health Sciences University, Haydarpaşa Numune Hospital, İstanbul, Turkey***Introduction:** Breast fibroadenomas are benign focal tumors usually seen in young women aged 15-25 years. Fibroadenoma is a tumor that contains both glandular and mesenchymal components.**Case:** A 14-year-old female patient was admitted due to the presence of a mass in the left breast. There was a palpable and non-fixed mass of about 6 cm in the physical examination of the patient. The patient underwent USG and retroareolar solid mass in the left breast which was 54x44 mm in size with a pronounced hypervascular character that was thought as fibroadenoma in the preplan was determined. MRI showed a solid lesion with sharp contour and a lobule which grew toward the external quadrant and the posterior of the left breast areola and 60x58 mm in diameter. Intensive contrast enhancement was present in the lesion and ductal dilation and contrast enhancement were not present. It was evaluated as BI-RADS 4. The patient was operated and excision was performed. The patient was routinely followed up since the surgical pathology was juvenile fibroadenoma.**Conclusion:** Fibroadenoma is an important part of breast masses among adolescents and young women. It is usually benign, unilateral single lesion and may be occasionally multiple and bilateral. Diagnoses are made radiologically and often do not require excision and follow up is recommended.**Keywords:** Fibroadenoma, juvenile fibroadenoma, breast

## PP-0828 [Breast Diseases and Surgery]

## Can FDG PET/MR Imaging which is a New Method Replace Sentinel Lymph Node Biopsy in Breast Cancer Surgery?

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The Ki-67 proliferation index of the primary tumor was divided into two groups, with a limit of 20%. Sensitivity, specificity, PPV, NPV and accuracy levels were calculated in both groups by accepting visual scoring system 1 and above as meaningful and 2 and above as meaningful.

**Conclusion:** The diagnostic performance of FDG PET/MR is similar to that of FDG PET/CT in the prediction of axillary lymph node metastasis in newly diagnosed breast cancer patients. Although high level of FDG uptake from background activity was determined to be high sensitivity and NPV, false positivity of the method was determined as high. Therefore, according to these findings, FDG PET/MR can not take place of sentinel lymph node biopsy.**Keywords:** PET/MR, breast cancer, sentinel lymph node

## PP-0829 [Breast Diseases and Surgery]

## Relationship of Molecular Subgroups with Prognostic Factors in Young Breast Cancer Patients

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Breast cancer is one of the leading causes of young age cancer-related deaths, especially in developed countries. When the survival rates of breast cancer are considered, it is seen that younger age is much lower in breast cancer compared to advanced age. Young breast cancer is generally more rare but more important. Especially the results are worse. This is because of the unfavorable clinicopathologic features, more aggressive tumor biology and delayed diagnosis. When younger age breast cancer and advanced age breast cancer are compared, more advanced stage is observed with hormone receptor negativity, high grade, HER-2 positivity, triple negative molecular subgroup and high lymphovascular invasion. For this reason, the prognosis is worse, the risk of recurrence is higher and the mortality rate due to breast cancer is higher. Young breast cancer is a description of a patient group diagnosed with breast cancer, especially under 40 years of age. In addition, when the very young breast cancer group under the age of 35 is to be diagnosed, the prognosis is much worse than that of the young breast cancer group. In this study, prognostic factors of young breast cancer patients were compared with molecular subgroups according to the information given in the literature. Again, the survival results revealed a difference between the young breast cancer group and the very young breast cancer group. 624 patients who had been diagnosed with breast cancer in the General Surgery department of Kocaeli University Medical Faculty between October 2013 and February 2018 were included. In this study, molecular subgroup data and survival data of 95 young breast cancer patients, 35 of them were very young age patients, were evaluated. It was seen that of the 6 patients who died, 3 died due to breast cancer. Distant metastasis was detected in 6 patients, regional recurrence in 2 patients and local recurrence in 2 patients.

**Keywords:** Breast cancer, young breast cancer, molecular subgroups, survival

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PP-0830 [Breast Diseases and Surgery]

## A Rare Variant of Metaplastic Breast Carcinoma Associated with Intraductal Breast Cancer: Case Presentation and Literature Review

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**Introduction:** Metaplastic breast cancer (MBC) is a rare, morphologically heterogeneous group of tumors with different immune profile. It was first described in 1973 by Huvos et al. MBC constitutes 0,25-1% of all breast cancers.

**Case:** On a 59-year-old female patient who was admitted due to a palpable mass in the breast, a core biopsy was planned upon the detection of a 40x37x30 mm sized hypoechoic round shaped irregularly contoured solid mass in the left breast axillary tail on USG and Mammography. In the patient who was diagnosed with metaplastic carcinoma with mesenchymal differentiation and intraductal carcinoma, no axillary pathologic lymph node was detected. After lumpectomy, neoadjuvant therapy was applied to her treatment. As a primary, MBC is usually identified as a palpable breast mass in women over 50 years of age. In the literature, the youngest reported age is 16 years. Patients with metaplastic carcinoma are admitted to the hospital with large tumor sizes with an average diameter of 3.7 cm (1.4-9.5 cm). The mammographic, sonographic and magnetic resonance imaging features of these carcinomas can be seen as irregular masses or cluster type cystic masses similar to intraductal cancers and benign lesions. Patients with MBC were found to have a lower 5-year survival (49-68%) when compared with patients with intraductal cancer. Axillary lymph node involvement varies between 8-40%. The risk of distant metastasis is higher than intraductal carcinomas and it is usually hematogenously to the lungs and bones. Hematogenous spread is more prevalent in especially those with predominantly sarcomatoid morphology. Metaplastic carcinomas are generally negative for ER, PR and HER2, but typically show positive expression of keratins with high molecular weight, including CK5/6 and 34beta E12. Estrogen and progesterone receptor positivity has been reported between 7-13%. Local recurrence rate ranges from 35-62% for 2-5 years. There are data about proven clinical and immunohistochemical factors that affect the prognosis of MBC patients. Specifically, the prognosis of the predominance of squamous cell component and skin invasion below 40 years of age is worse. Some studies have shown that adjuvant RT is beneficial to overall survival.

**Conclusion:** The association of metaplastic and intraductal breast cancer has been rarely reported in the literature. While there is no standard treatment approach for MBC, the presence of additional pathology in treatment should be considered. Surgery forms the basis of treatment for localized disease and can be followed by RT and/or CT, hormonal therapy and other types of targeted therapy. For more effective treatment methods, larger series of studies are needed.

**Keywords:** Metaplastic breast cancer, intraductal breast cancer, approach to metaplastic carcinomas

## PP-0831 [Breast Diseases and Surgery]

## Axillary Ultrasound in Early Stage Breast Cancer

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**Objective:** Sentinel Lymph Node Biopsy is a standard procedure currently being used in the axillary evaluation of breast cancer patients. The ACOSOG Z0011 study questions the necessity of performing axillary dissection in a selected group of sentinel node positive patients and suggests to investigate the applicability of these discussions on ultrasonically positive patients. The purpose of our study is to question the reliability of ultrasound examination in evaluating axillary conditions in early stage breast cancers.

**Material and Methods:** Clinical T1-2, N0 patients admitted to our clinic between 2010-2016 were included in the study. When sentinel node biopsy and metastasis were detected, axillary dissection was applied to all patients. The patients' ultrasound results were compared with their pathology.

**Results:** Sensitivity and specificity of axillary ultrasound for axillary disease were calculated respectively as 69.2% and 98%, negative predictive value was 86.4% and positive predictive value was 94.7%.

**Conclusion:** As a result of our study, high sensitivity, specificity, positive predictive and negative predictive values with axillary ultrasound may be an alternative to sentinel node biopsy in the axillary evaluation of breast cancer patients. In patients with breast cancer, axillary ultrasound will contribute to the clarification of large studies such as SOUND which operates comparatively with sentinel node biopsy.

**Keywords:** Axillary ultrasound, breast cancer, sentinel node biopsy

## PP-0832 [Breast Diseases and Surgery]

## Giant Apocrine Cyst

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Breast cysts are usually benign. Breast cysts are the most important cause of palpable breast masses. Breast cysts are thought to develop due to natural changes in hormone levels with age. Breast cysts can be seen at any age, but they are most frequently observed over 35 years of age. In a study conducted on the pathological examination of 150 breast cysts; 79 of these cysts are within the definition of ultrasonographically complicated cyst; and 18 (23%) were found to be malignant. In our case, a 36-year-old female patient was admitted to our department with complaints of asymmetry in her breasts. It was reported that there was growth without the color change on the right breast for the last six months. About a year ago a cyst in the same breast was aspirated. Physical examination revealed that the right breast was significantly larger than the other one. In the breast ultrasonography a 13x5 cm sized cystic lesion with a 1 cm diameter nodular component with internal echogenites within was observed in the right breast retroareolar area. Via breast MR, in terms malignancy a highly suspicious complicated cyst with a large number of nodular contrast involvements that showed protrusion to lumen wall was detected. Furthermore, the post-contrast examination revealed that the nodular contrast involvements were filling almost the entire peripheral wall of the right breast. No malignant lesion was detected in the left breast. The mammography revealed an increase in the parenchyma density of the right breast and a smooth contour mass filling almost the entire right breast (belonging to a complicated cyst with dense content that contained multiple contrasting papillary projections on the wall of the mass). The cyst was excised via periareolar incision. Microscopic examination of the sections revealed papillary structures with epithelial layers composed of cuboidal apocrine cells with round nucleus, large eosinophilic cytoplasm, without mitosis and atypia, branching fibrovascular cores on the wall of the cyst and stratification on these cores. With these findings, patient's differential diagnosis was papillary neoplastic lesions and apocrine cysts. Myoepithelial layer was not detected in the papillary structures during immunohistochemically applied p63. The patient was evaluated as Giant Apocrine Cyst, Intracystic Apocrine Papillary Proliferation with these findings. Intraductal Papilloma (IDP), our differential diagnosis, is benign lesions involving epithelial and myoepithelial cell layers on branching fibrovascular cores. Giant IPDs are not common, and as far as we know, only 7 cases have been reported in the literature. In our case, it was measured as 13x8x6 cm in size and it was above the standard the papillary breast lesion size.

**Keywords:** Apocrine cyst, breast cyst, giant

## PP-0833 [Breast Diseases and Surgery]

# Sonoelastography in the Evaluation of Solid Breast Masses

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The aim of our study is to evaluate the effectiveness of sonoelastographic scoring system in malignant-benign differentiation of breast masses. 180 solid breast masses (147 benign, 33 malignant) in 155 patients were evaluated prospectively in a 2-year period. Each lesion was examined by B mode sonography and sonoelastography. The results of the examinations were compared with histopathological results. The diagnostic performances of sonoelastographic scoring and B-mode sonography methods were evaluated. The sonoelastography average score for benign lesions was  $2.61 \pm 0.62$  while for malignant lesions it was  $3.73 \pm 0.69$ . The accuracy, sensitivity, specificity, positive and negative predictive values for B-mode sonography were 81%, 89%, 79%, 46% and 97% respectively; for sonoelastographic scoring they were 87%, 73%, 91%, 69% and 92%. In the differentiation of malignant-benign breast masses, we can say that these results and sonoelastographic evaluation after B-mode sonography examination may increase specificity.

**Keywords:** Sonoelastography, breast, cancer, ultrasound

## PP-0834 [Breast Diseases and Surgery]

# The Effectiveness of Screening Applications in Breast Cancer

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The effectiveness of screening practices in breast cancer is known. However, are these screening applications effective in our country? In order to study this issue, our hospital was selected as the screening hospital. The cases that had been operated before and after the selection were compared in our hospital.

A total of 288 patients were included. Of these 288 patients, 285 (99%) were female and 3 were male. The average age of the patients who were admitted was  $56.70 \pm 13.23$  (55,17-58,24). When the breast with the involvement was examined; it was seen that 153 were left breast and 135 were right breast. When the tumor size was examined, it was found that 159 (55.2%) patients had a tumor size of <2 cm, 116 (40.3%) patients had 2-5 cm, and 13 (4.5) patients had a tumor size of >5 cm. 101 patients (35.1% 4) had stage 1, 78 patients (27.1%) had stage 2A, 45 patients (15.6%) had stage 2B, 38 patients (13.2%) had stage 3A, 23 patients (8%) had stage 3C, and 1 patient (0.3%) had stage 4.

203 (70%) patients were pre-screening patient group and were referred to as Group A. 85 (30%) were post-screening group and were called Group B.

Of the 203 patients in group A, the mass in 100 patients was left-localized. When the size of the tumor in group A was examined, it was determined that 107 (52.7%) patients had tumor sizes of <2 cm, 86 (42.4%) patients 2-5 cm and 10 (4.9%) patients with a tumor size of >5 cm. It was detected that 67 patients (33%) had stage 1, 55 patients (27.1%) had stage 2A, 31 patients (15.3%) had stage 2B, 29 patients (14.3%) had stage 3A, 21 patients (10.3%) had stage 3C, and 1 patient (0.04%) had stage 4.

Of the 85 patients in group B, 53 (62.4%) patients had left breast localized mass. When tumor size was examined, it was found that 52 (61.2%) patients had a size of 2 cm, 30 (34.2%) patients had 2-5 cm and 3 (3.5%) patients had a size of >5 cm. It was found that 36 (42.4%) patients were stage 1, 23 (27.1%) were stage 2A, 14 (16.5%) patients were stage 2B, 9 (10.6%) patients were stage 3A and 3 (3.5%) patients were stage 3C.

There was no difference between the two groups in terms of all data.

**Keywords:** Screening, breast cancer, staging

## PP-0835 [Breast Diseases and Surgery]

# A Rare Breast Disease: Granulomatous Mastitis

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**Objective:** Granulomatous mastitis is a chronic inflammatory disease of breast tissue, manifested by various clinical manifestations ranging from erythema, swelling and stiffness to sinus or abscess formation. Its etiology is not fully known. Because the resulting lesions can be seen as a hard mass with irregularly circumscribed lesion, differential diagnosis with breast cancer should be performed. Determination of radiological and pathological features of granulomatous mastitis cases and examination of treatment results.

**Material and Methods:** Twenty-five patients who received long-term nonspecific antibiotherapy and anti-inflammatory drug treatment for 2 weeks due to mastitis and did not respond to treatment between January 2016 and January 2018 were included in the study.

**Results:** The ages of the cases ranged from 23 to 54 and their average age was 34 years. All cases were examined by breast ultrasonography. Mammography and breast magnetic resonance imaging were performed in cases if required. Thirteen (52%) cases had involvement in the right breast, 10 (40%) in the left breast and 2 (8%) had bilateral involvement. In terms of localization, the most common localization was right upper external quadrant by 9 (36%) cases and 4 (16%) cases had left upper external quadrant localization. Because of the malignant appearance of radiological examinations of seven (28%) patients, tru-cut biopsies were performed and the diagnosis of malignancy was excluded. The remaining cases were confirmed that they were free of tuberculosis, bacterial or fungal infections by culture or fine needle aspiration biopsy. Before treatment, abscess was detected in 6 (24%) cases and antibiotic treatment was given after drainage. All cases were treated with methylprednisolone with a dose of 0.6 mg/kg for a month. Then the dose was reduced and cut. Eighteen (72%) cases were responsive to the treatment. Three (12%) patients did not benefit from steroid treatment. Four patients (16%) had recurrence during the treatment and a surgical decision was made. In these cases, all masses were resected in order to form a negative surgical margin. Due to the histopathological examinations of the removed specimens, diagnosis of idiopathic granulomatous mastitis were made. All cases were followed for 6 months. In the only (4%) case who had been responsive to steroid therapy, 4 months later recurrence in the other breast induced by trauma was detected.

**Conclusion:** In cases of granulomatous mastitis, which is a rare breast disease, infection and malignancy should absolutely be ruled out among the differential diagnoses. If there is no contraindication after the diagnosis of granulomatous mastitis, steroid treatment should be started in all cases. This treatment has high success rates.

**Keywords:** Granulomatous mastitis, treatment, steroid

## PP-0836 [Breast Diseases and Surgery]

# Mastectomy Case Performed by Interfacial Body Blocks in High Risk Patient with Anesthesia

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**Case:** 80 years old female patient had invasive breast cancer (ER +, PR-, HER2 +) with skin involvement, 3 cm in size in the left lower middle quadrant; axillary or distant metastases were not detected. Chemotherapy was not planned by medical oncology due to high co-morbidity risk of the patient due to the presence of congestive heart failure, cardiac pacemaker, scoliosis and pectus excavatum in her history. Prenatal nerve block (PECs) and serratus anterior plane (SAP) block were planned for the surgical anesthesia of the patient with high risk score in preoperative anesthesia evaluation. The pectoralis major and minor muscles were reached with a block needle (22 G, 50-100 mm) under ultrasound (US) guidance and 0.2 ml/kg, 0.25% bupivacaine was injected. Afterwards, 0.2 ml/kg, 0.25% bupivacaine was applied to the facial region between pectoralis minor and serratus anterior upon scanning anterior axillary on the 4th costa. The SAP block, on the other hand, was made in the more lateral and posterior regions and by reaching the image of the 5th costa in the midaxillary line. Here, the US probing was placed in the coronal plane and 0.4 ml/g, 0.125% bupivacaine was performed in the facial plane between serratus anterior and latissimus dorsi. Thus, left mastectomy and sentinel lymph node biopsy were performed by providing analgesia for the surgical procedures to be performed in the breast and axilla. It was observed that the need for postoperative analgesia decreased in the patient who had no complications during the perioperative period. The patient was uneventfully discharged on the third postoperative day.

PECs and SAP blocks developed by Blanco between 2011 and 2013 for thoracic anesthesia is an interfacial regional anesthesia technique applied under US guideline. PECs blocks are performed in two stages. While PECs I and the anterior branches of the medial and lateral pectoral nerves and intercostal nerves located between the pectoralis major and minor muscles are blocked,

the lateral branches of the upper intercostal nerves (T3-9) are blocked by injecting a local anesthetic between the pectoralis minor and serratus anterior muscles in the PECs II block. With the SAP block, the thoracicus longus, thoracodorsal nerve and intercostobrachial nerves are blocked by the injection performed between the serratus anterior and latissimus dorsi muscles. These nerves, especially in the innervation of the axillary has important roles. These blocks were originally developed as an alternative to thoracic epidural and paravertebral blocks to provide analgesia for the surgeries performed on hemithorax; thus, hemodynamic (eg, hypotension, bradycardia) and technical side effects (pneumothorax, spinal cord injury, etc.) are prevented. In the literature, these blocks are generally combined with general anesthesia in order for postoperative analgesia in breast surgery, but they have been reported to be used alone in surgical anesthesia. In our case, PECs and SAP block were used for surgical anesthesia alone, but effective analgesia was observed in the postoperative period.

**Conclusion:** Although PECs and SAP block is mostly used as a component of multimodal analgesia in post-operative period of breast surgery, it can be used alone as an alternative to general anesthesia in high-risk patients.

**Keywords:** Breast cancer, interfacial body blocks, high risk anesthesia

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## PP-0837 [Breast Diseases and Surgery]

# Prostate Cancer and Breast Cancer Association: A Rare Case

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**Introduction:** About 1% of all breast cancers are seen among males. Breast cancer is the third most common cancer type in men after prostate cancer and lung cancer. Although male breast cancer and prostate cancer are similar in etiopathogenicity, the association of these two cancer types is uncommon. This case report describes a case, with no history of breast cancer in the family, and who has been receiving medical treatment due to the diagnosis of metastatic prostate cancer and then was diagnosed with breast cancer during his follow-up.

**Case:** An 82-year-old male patient with a history of luteinizing hormone-releasing hormone analogue and bisphosphonates use and who had been diagnosed with prostate adenocarcinoma metastatic to the bones in 2011 with no history of operation was admitted to our department with the complaint of palpable stiffness on his right breast. Physical examination of the patient revealed a skin-invasive rigid fixed mass about 3 cm in diameter that caused shrinkage of the papilla in the retroareolar region of the right breast. It was seen on the right side of the breast ultrasound that the patient had a solid lesion with rough calcification 17x23 mm in size and with lobulated contour.

In the subsequent mammography of the patient, opacity of the mass with irregularly limited coarse calcification was observed in the right mammary retroareolar space of 24x20 mm in size. The mass was evaluated as BIRADS 4, and no malignant lymph nodes were found in axillary areas of the graphy. The patient's tumor markers were measured as CA 15-3: 15.3 U/mL, CEA: 0.74 ng/mL, PSA: 5,138 ng/mL, and total testosterone: 1,6 ng/dL. According to the pathology result of the tru-cut biopsy performed on the right breast, the patient was reported as invasive carcinoma showing squamous differentiation ER (-), PR (-), CerbB2 (+1) (NEGATIVE), E cadherin (+) p63 rare (+), CK5/6), CD31 CD34 was reported as (+) on the vessel wall. Preoperative preparations of the patient were performed and the patient was operated on and modified mastectomy was applied to the patient. The patient was discharged on the second postoperative day without any complications.

**Conclusion:** About 0.2% of all cancers in males are breast cancer. The incidence of metachronous and synchronous cancers in males with breast cancer is 10.6%. Male breast cancer and prostate cancer are similar in etiopathogenicity and hormonal, genetic and environmental factors gain importance in etiology. BRCA2 mutation has been shown to increase prostate and breast cancer risk in men. Screening of the BRCA2 gene in patients with prostate cancer may be useful in the future for breast cancer risk in both the patient and family members. Although breast cancer is not common in males and since metachronous and synchronous cancers are highly prevalent, screenings and gene analysis in prostate cancer patients gain importance in early diagnosis and treatment.

**Keywords:** Male breast cancer, prostate cancer, BRCA-2

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## PP-0838 [Breast Diseases and Surgery]

# Etiological Factors in Patients Presenting with Mastalgia Complaints

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**Objective:** Mastalgia causes approximately 2/3 of women to refer to a doctor at some point in their lives. It is defined as the feeling of pain in one or both breasts as well as pain on the nipple. It affects everyday life due to malignant suspicion in women. Many predisposing factors in the literature on mastalgia etiology have been held responsible in the literature. In particular, changes in levels of hormonal factors such as estrogen, progesterone and prolactin are discussed. Breast pain is assessed as cyclic and non-cyclic. Cyclic mastalgia is menstruation-related bilateral pain, while non-cyclic mastalgia is unilateral pain that does not follow the menstrual cycle. We aimed to reveal predisposing factors in patients with mastalgia complaints.

**Material and Methods:** Files and archive records of patients who were referred from the obstetrics and gynecology clinic and who were admitted to the general surgery clinic with a complaint of breast pain and without any pathology in the mammography and ultrasonography between January 2016 and December 2017 were screened. Patients' age, occupation and educational status, complaints onset period, daily pain duration, relationship of pain and menstruation, menopausal status, family history, history of previous breast surgery, history of psychiatric admission and use of drugs, body mass indexes, FSH, LH, estrogen, progesterone and prolactin levels at the time of admission were recorded.

Analysis of the data was performed via SPSS for Windows 22 package program. Descriptive statistics for continuous variables are shown as average±standard deviation or median (minimum-maximum) and categorical variables were shown as number of cases and (%). Categorical variables among the groups were assessed with Chi-square test.

**Results:** The median age of the 115 patients included in our study was 37 (18-70). In seven patients, there was history of breast cancer in the family. 101 patients were housewives and 68 patients were primary school graduates. In 45.2% of patients, the pain was over 24 weeks. When the daily pain duration was examined, it was observed that the most frequent complaints were that the pain was rare and it lasted 1-2 hours per day. The mastalgia of twenty-nine patients was found to be related to the menstrual cycle. Seventeen patients were in menopausal status. Only 3 patients were found to have had breast surgery previously. Seventeen of the patients had previously referred to the psychiatric outpatient clinic and 18 were still on psychiatric drugs. It was calculated that 35.7% of the patients had body mass indexes of between 25.1-27.5. Their gynecological hormone levels are also presented.

**Conclusion:** Although we need patient groups with higher populations, we reached the point that the socio-cultural level of the region where our study was conducted was low, and the patients with the history of psychiatric treatment were presenting themselves to the doctors with mastalgia complaints in order to obtain secondary gain.

**Keywords:** Mastalgia, gynecological hormones, cyclic mastalgia

## PP-0839 [Breast Diseases and Surgery]

# Atypical Pathology Findings and Clinical Approach in Provisional Diagnosis of Fibroadenomic Excisional Breast Biopsies

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**Objective:** Excisional breast biopsies are both diagnostic and therapeutic and it is the most important and effective surgical procedure that is used in the diagnosis of masses that are thought to be clinically benign. The most common pathology of the masses in the breast was fibroadenomas. The demographic features and pathology results of the patients who were operated with clinical and radiological provisional diagnosis of fibroadenoma were evaluated retrospectively.

**Material and Methods:** A total of 347 consecutive excisional breast biopsies that were performed by the same general surgeon with the diagnosis of fibroadenoma, 23 under general anesthesia and 324 under local anesthesia, between May 2009 and January 2018 were included in the study. All of the patients had a palpable mass in the breast in their pre-operative physical examination. Bilateral breast ultrasonography and mammography when required and/or breast MRI were performed in all cases. As a result of radiology; for malignancy and/or BIRADS IV and over, incisional biopsy were preferred and they were excluded from the study. All pathology results were evaluated in our hospital pathology unit and pathology results were obtained from the report result system.

**Results:** The average age of the patients was 27.6 (13-58) years. 298 cases (86%) had fibroadenoma, 32 cases (9%) had hamartoma, 14 cases (4%) had philloides tumor, and 3 cases (0.8%) had solid papillary carcinoma (2 cases had invasive solid papillary carcinoma with neuroendocrine and mucinous differentiation, 1 case had solid papillary carcinoma in situ carcinoma). Breast conserving surgery was performed for in situ solid papillary carcinoma while modified radical mastectomy was performed in 2 other patients. Only one of the cases with philloides tumor was diagnosed as malignancy and a modified radical mastectomy was performed as a complement treatment. There are significant differences in average pathologic mass lesion size; 2.2 cm in fibroadenomas, 2.9 cm in hamartomas, 3.8 cm in philloides tumors, 1.7 cm in solid papillary carcinomas.

**Conclusion:** The necessity of biopsy for each patient who were admitted to the hospital due to mass in the breast and radiologically preliminary diagnosis of fibroadenoma has once again emerged and the results of atypical pathology, which may occur in our clinical approach, and that the patient should be informed about, are remarkable. Pathologic mass lesion size should be

considered clinically. In breast ultrasonography; Phalloides tumors, solid papillary carcinomas and hamartomas may be confused with fibroadenomas.

**Keywords:** Excisional biopsy, fibroadenoma, hamartoma, mammary mass, papillary carcinoma, phalloides tumor

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## PP-0840 [Breast Diseases and Surgery]

# Primary Neuroendocrine Carcinoma of the Breast

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**Introduction:** The rare primary neuroendocrine carcinoma in the breast is often seen in elderly women and has similar morphological features to the neuroendocrine tumors in the gastrointestinal tract and lungs. In neuroendocrine carcinoma, more than 50% of neuroendocrine markers of tumor cells are expressed. In the case we are presenting, the tru-cut biopsy result of the patient with a mass in the right breast was invasive ductal cancer. The post-pathology result of the patient who had undergone axillary dissection due to partial mastectomy and SLNB positivity was primary neuroendocrine carcinoma. Primary neuroendocrine carcinoma is presented as a case in this article.

**Case:** A mass was detected in the right breast of a 68-year-old female patient with no previous complaint. A mobile, irregular contour mass of 2 centimeters in size was palpated in the lower outer quadrant of the right breast. On mammography and ultrasonography, a dense lesion accompanying with 16x27 millimeter in size irregularly limited microcalcification was observed in the right breast outer midline. In both axillary, lap in pathological dimension and configuration was not observed. It was evaluated in BIRADS-4 category. On the tru-cut biopsy examination, invasive carcinoma and ductal carcinoma focus was observed. Right partial mastectomy and axillary dissection were performed. In the pathology examination, a well differentiated neuroendocrine tumor with a diameter of 2.4 centimeters, intermediate grade, infiltrative character and showing perineural invasion was detected. There was no evidence of multicentric tumor focal, necrosis, calcification, lymphatic and blood vessel invasion in the insitu component of the tumor. The distance from the posterior surgical margin to the tumor was 0.6 centimeters and the distance to the other surgical margins was more than 1 centimeter. No tumor focus was seen on the papilla and skin breast. Carcinoma metastasis was detected in 3 of 10 lymph nodes in the right axillary and all of them were evaluated as metastatic. In immunohistochemical dye results: Estrogen receptor 90% strong positive, progesterone receptor 95% strong positive, Cerb B2 negative, Ki-67 1-5%, E-cadherin positive, chromogranin diffuse strong positive, synaptophysin diffuse strong positive, CD 56 diffuse strong positive, P63 negative, and SMA negative. In PET that was performed postoperatively, no primary focal or metastatic involvement was observed. Hormonotherapy was applied and no recurrence and metastasis were detected in 12 month follow-ups.

**Conclusion:** Although neuroendocrine tumors show the same features of the organ that they originate from, they all have common neuroendocrine structures. The incidence is 0.2/100.000 individuals, and constitutes 0.5% of all cancers. 65% of the cases occur in gastrointestinal system, 25% in the lung and 10% in other endocrine tissues. Breast neuroendocrine tumors are frequently found in solid form. Neuroendocrine tumors in other organs rarely metastasize to the breast as they rarely metastasize to other organs. Neuroendocrine markers such as neuron specific enolase, chromogranin A and synaptophysin are considered to be pure neuroendocrine tumors when they are found in more than 50% of malignant tumor cells. Immunohistochemistry results of our patient were: chromogranin, synaptophysin, diffuse strong positive for CD 56; 90% strong positive for estrogen receptor, 95% positive for progesterone receptor, negative for cerbB2 and no other primary foci in PET/CT after surgery support primary neuroendocrine diagnosis. Making the diagnosis of primary neuroendocrine tumor pre-operatively and our treatment approach during diagnosis is open to improvement. It is obvious that although primary neuroendocrine tumor diagnosis is possible through diligently performed histopathological examination and not detecting primary focus in other foci, improvements on diagnosis and treatment are still required.

**Keywords:** Carcinoma, neuroendocrine, breast, chromogranin, synaptophysin

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## PP-0841 [Breast Diseases and Surgery]

# Do the Demographic Characteristics of Breast Cancer Vary from Region to Region?

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**Objective:** Breast cancer is the most common type of cancer among women and is among the most important causes of female deaths over 40 years of age. It is more common in developed or developing countries, but less common in undeveloped countries. The incidence of breast cancer also shows regional differences in our country. Differences in regional risk factors may change this incidence. Breast cancer risk factors include; female gender, 50 years of age and above, the age of menarche and menopause, giving birth in advanced age, not breastfeeding, family history of breast cancer, oral contraceptive use, obesity, lack of physical activity and environmental factors. Our aim in this study is to determine the demographic characteristics of patients who have been admitted due to breast cancer in Sakarya and Ankara and to show the difference if they exist.

**Material and Methods:** The demographic characteristics of 174 breast cancer patients treated in Sakarya Training and Research Hospital, Department of General Surgery between 2015 and 2017 were compared with the parameters of 242 breast cancer patients in Ankara Numune Training and Research Hospital, Breast Endocrine Unit between 2004-2009. In this retrospective study, the age of the patient, age at menarche, age at first birth, age at last birth, age of menopause, height, weight, body mass index, education status, hormone replacement therapy and oral contraceptive use, smoking and alcohol use, family history were evaluated.

**Results:** The average age of patients with breast cancer who were operated on in Sakarya was 54.14 years, whereas the average age of patients in Ankara was 51.15 years. It was found that breast cancer patients over 50 years of age in Sakarya were more than those in Ankara over 50 years of age ( $p < 0.05$ ). The menarche age of patients with breast cancer in Sakarya is higher than the menarche age of patients in Ankara ( $p < 0.05$ ). The rate of oral contraceptive use is higher in Sakarya. The proportion of patients who did not give birth in both cities is the same. There is no significant difference in terms of education status, age at last birth, HT, alcohol and tobacco use, and family history. The BMI of the patients in both cities was 30-35%.

**Conclusion:** Environmental and genetic factors play a role in breast cancer etiology. Environmental and cultural differences can show regional change. Breast cancer risk factors show regional differences in our country.

**Keywords:** Breast cancer, mortality, demographic characteristics

## PP-0842 [Breast Diseases and Surgery]

# Clinical Presence of Axillary Metastases in Node-Negative Breast Cancer

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**Objective:** The most important prognostic factor of breast cancer is axillary involvement. For this reason, axillary staging in terms of treatment planning and survival is very important. Axillary dissection is quite morbid. For this reason, sentinel lymph node biopsy is routinely performed in most centers with no clinical manifestations of axillary involvement. Axillary metastasis can be detected in a significant number of these cases. We aimed to investigate the factors associated with the detection of metastases in the sentinel lymph node biopsy without clinical axillary involvement in our study.

**Material and Methods:** Cases who had been performed on sentinel lymph node biopsy due to breast cancer between January 2012 and January 2018 were evaluated retrospectively through electronic data records. Cases were performed sentinel lymph node biopsy with combined (blue dye + lymphoscintigraphy), blue dye or lymphoscintigraphy. The status of axillary was determined according to the histopathological result of the sentinel lymph node. The patients were divided into two groups: cases with axillary metastases (Group I) and cases without axillary metastases (Group II). Groups were compared in terms of age, hormone receptor status, menopausal status, tumor location, histopathologic type of tumor, Ki 67, C-erb B2, tumor size and other prognostic factors. Ki-67 was determined as negative below 14% and positive in 14% and over.

**Results:** A total of 64 cases were included in the study; twenty-nine (45%) cases in Group I and 35 (55%) cases in Group II. The average age of group I was  $53,48 \pm 13,37$  years and the average age of group II was  $51,29 \pm 11,58$  years. There was no significant relationship in terms of age ( $p: 0,681$ ). Group I average tumor size was  $25,71 \pm 13,56$ , for group II the average was  $21,37 \pm 14,46$  ( $p: 0,069$ ). While there was no significant difference between the groups in terms of tumor invasion type, histological grade, vascular invasion, nerve invasion, tumor T stage, multifocality and bilaterality ( $p > 0,05$ ), Lymphovascular invasion was significantly higher in group I compared to group II (57% versus 13%) ( $p: 0,003$ ).

There was no significant correlation in terms of estrogen receptor and C erb b2 ( $p > 0,05$ ), while there was a significant difference in terms of progesterone and Ki67 between the groups ( $p$  values were 0.036 and 0.045, respectively). There was no significant difference in terms of menopausal status, tumor's being palpable or not, combined or single sentinel node biopsy, total number of examined lymph nodes, the presence/absence of paracentinal lymph nodes and presence of one or more sentinel lymph nodes ( $p > 0,05$ ).

**Conclusion:** Axillary involvement can be detected in a significant number of cases with no clinical axillary involvement. Our study also found that lymphovascular invasion was associated with sentinel lymph node biopsy positivity. In addition, although the Ki 67 value's being less than 14% and the positive progesterone receptor is known to be a good prognostic factor, we also found that these two parameters correlate with axillary involvement. These results showed that in cases with axillary involvement, the classical prognostic factors we know in breast cancer are open to different interpretations in clinically undetected cases.

**Keywords:** Axillary metastasis, breast cancer, sentinel lymph node

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## PP-0843 [Breast Diseases and Surgery]

# Incorrect Negativity in Sentinel Lymph Node Assessment during Intraoperative Consultation in Breast Cancer

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**Objective:** Lymphadenectomy is a standard procedure in the staging of breast cancer and in the selection of treatment options as in many malignant tumors. It has been reported that axillary lymph nodes for intraoperative consultation in breast cancer have successfully demonstrated the status of axillary with the percentage of 90-98% and false negativity in less than 5%. In this clinicopathologic study, it was aimed to determine the false negativity rate determined in the histopathological examination of the sentinel lymph node materials sent to the pathology laboratory for intraoperative consultation and the reasons for this.

**Material and Methods:** A total of 2012 axillary sentinel lymph nodes of 760 cases sent to the pathology laboratory for the intraoperative consultation between 2008-2017 at Gazi University Faculty of Medicine and were retrospectively screened from the hospital information management system and report registry books and reevaluated by a breast pathology and the results were presented as percentages.

**Results:** Of the 760 patients who had been operated due to invasive breast carcinoma, 755 (99.3%) were female and 5 (0.7%) were male. The average age ranged from 28 to 72 years. 1535 (76.3%) of a total of 2012 sentinel lymph nodes sent for intraoperative consultation were studied with "frozen" section and "imprint" method and the remaining 487 (23.7%) lymph nodes were evaluated in permanent sections following tissue follow-up. Metastasis was detected in 169 (11.0%) of 1535 lymph nodes examined in intraoperative consultation and the metastatic lymph node was confirmed in the permanent sections. No false positivities were found. However, it was understood that the micrometastasis focus of one lymph node that had not been detected in permanent sections but was observed in the "frozen" section was due to the depletion of the tumor focus in the tissue in the process of shaving. A total of 234 (11.6%) lymph node metastases were detected after the examination of all sentinel lymph nodes with permanent sections, including the lymph nodes sent to the intraoperative consultation but not with the "frozen" section. The number of lymph nodes evaluated as false negative was 65 (3.2%).

**Conclusion:** In the literature, the incidence of false negativity in the intraoperative consultation of sentinel lymph node evaluation is <5% and the result we obtained in our study about this issue is consistent with the literature. Among the causes of false negativity, histological subtype and size of the tumor, section-folding and spillage, frozen artifact of the tissue-very common problems that are commonly experienced during frozen section procedure-were determined. Sentinel lymph node biopsy has proved to be a successful indicator for lymphadenectomy in breast cancer staging. However, it should be known by both the surgeon and the pathologist that there might be natural sampling and macroscopic-microscopic examination errors in intraoperative consultation. For this reason, the sentinel lymph nodes sent for intraoperative consultation should be optimally examined by the pathologist in accordance with the expected intraoperative consultation protocol, which is determined at each center.

**Keywords:** Breast cancer, sentinel lymph node, axillary staging

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## PP-0844 [Breast Diseases and Surgery]

# The Efficacy of Tropical Steroid Use in the Treatment of Idiopathic Granulomatous Mastitis

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**Objective:** Idiopathic granulomatous mastitis (IGM) is a chronic inflammatory breast disease that can be confused with breast cancer clinically and radiologically, with no known etiology. The treatment of the disease is still controversial. It is aimed to determine the effectiveness of topical steroid use in IGM treatment.

**Material and Methods:** The 3 month-clinical follow-ups of the patients who had been admitted to Marmara University, Faculty of Medicine (MUFM) Department of General Surgery, Breast-Endocrine Unit and who were already diagnosed with IGM and treated with topical steroids were performed. The criteria to be included in the study were: being 18 years old and above, clinically and pathologically diagnosed with IGM, unresponsive to oral steroids. Pregnants, cases with malignant diagnosis and who did not give consent were not included in the study. In addition to the demographic features of the cases, radiological responses (presence of abscess, number of lesions, localization of lesions), changes in physical examination findings (fistula, presence of erythema), pain conditions [Visual Analogue Scale (VAS) (0-10 points)] were evaluated. Clinical and radiological healing/recurrence presence was noted.

**Results:** Eighteen women with IGM diagnosis were included in the study. The average age of the patients was  $35.6 \pm 6.4$  years and the average duration of the illness was  $11.2 \pm 9.0$  months. While the pain VAS score at the onset of the disease was  $5.3 \pm 3.2$ , it was  $1.9 \pm 1.7$  in the first month and  $0.6 \pm 0.3$  in the third month [Onset vs 1st month ( $p=0.002$ ) and 1st month vs 3rd month ( $p=0.003$ ), onset VAS vs 3rd month VAS ( $p=0.004$ )]. While at the beginning of the disease, erythema was detected in 88.9% of the patients ( $n=16$ ), in the 3rd month examination 46.6% ( $n=7$ ) of the patients had erythema ( $p=0.005$ ). While the sensitivity rate at the first month was 44.4% ( $n=8$ ), the sensitivity rate in the 3rd month was 46.7% ( $n=7$ ) ( $p=0.067$ ). While the presence of fistula was found as 27.8% ( $n=5$ ), in the third month the rate was determined as 20.0% ( $n=3$ ) ( $p=0.02$ ).

**Conclusion:** The use of topical steroids in IGM patients has been shown to reduce pain in a statistically significant manner. In addition, a decrease in the number of fistula and breast erythema has been detected. Findings regarding sensitivity, malformation, and mass were not significantly altered.

**Keywords:** Breast, mastitis, granulomatous mastitis, topical steroids

## PP-0845 [Breast Diseases and Surgery]

# The Effectiveness of the BREAST-Q Breast Conserving Surgery Module in Measuring the Quality of Life and Patient Satisfaction in Cases on whom were Performed Oncoplasty Breast Surgery

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**Objective:** Recently, the BREAST-Q module has been shown to be effective in measuring the quality of life and patient satisfaction in patients with breast cancer who had been treated with breast conserving surgery (BCS).

It is aimed to evaluate the efficacy of the BREAST Q module, whose effectiveness has already been displayed in breast conserving surgery, in cases with oncoplastic BCS.

**Material and Methods:** Quality of life and patient satisfaction were assessed with the BREAST Q-module in the post-operative 6th month in patients who were performed Oncoplasty BCS with Stage 0-I-IIA breast cancer. Clinical risk factors causing low patient satisfaction and other factors in BREAST-Q that are scored between 0-100 on particularly the relationship between patient satisfaction and breast cosmetics (radiotherapy-satisfaction relationship, psychosocial patient satisfaction, sexual and physical satisfaction, physician/medical team satisfaction, satisfaction on being informed) were evaluated. Risk factors that cause low-patient satisfaction were assessed by linear regression method. The correlation between the Spearman Rho correlation analysis and the sections forming the module was evaluated.

**Results:** BREAST-Q patient satisfaction evaluation module was applied to 96 female patients who had undergone oncoplasty BCS between 2011-2017 at Marmara University, Faculty of Medicine. The average age of the patients was  $44.7 \pm 9.3$ . The median value was 79 (IQR: 67-86) when "satisfaction with breast cosmetics" was evaluated. The lowest satisfaction rate was "psychosocial satisfaction" and the median was 51 (IQR: 43-60). In multivariate analysis, postoperative radiotherapy, axillary surgery, delayed wound healing were independent risk factors for low patient satisfaction ( $p: 0.001$ ,  $p: 0.012$ ,  $p: 0.003$ , respectively). A strong correlation between sexual satisfaction and satisfaction with postoperative cosmetic surgery was found (Spearman rho coefficient: 0.697).

**Conclusion:** The BREAST Q module, which has been validated in BCS, provides valuable information about postoperative cosmetic, sexual, and psychosocial satisfaction when applied to the cases with Oncoplasty BCS.

**Keywords:** Breast cancer, BREAST-Q, breast conserving surgery, oncoplasty breast surgery

## PP-0846 [Breast Diseases and Surgery]

# Rare Complication of Axillary Dissection: Chylous Fistula

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**Introduction:** The development of chylous fistula after axillary dissection is a very rare complication. We aimed to present the management of the case with breast cancer who had undergone simple left mastectomy, SLNB (sentinel lymph node biopsy), and then axillary dissection and who developed chylous fistula on the fifth postoperative day.

**Case:** A 59 year-old patient who had noticed a mass in her left breast was performed tru-cut biopsy at the external center. The patient was admitted to our department since she had been reported as invasive carcinoma by the pathology results. A mass with irregular limited, solid, immobile and malignant featured of ~ 2 cm in diameter was detected in the upper outer quadrant of the left breast. It was decided that the patient without involvement in the axillary and distant organs on preoperative evaluation to undergo left simple mastectomy and SLNB with the patient's consent. Upon the detection of a lymph node tumor in SLNB, the patient underwent standard level I-II axillary dissection. Hemovac drain was placed under the axillary lodge and flap. The patient who had no problems after surgery was discharged on the second postoperative day with his drains. The patient who visited our department for her follow-up on the postoperative 5th day, it was determined that the drainage in the axillary lodge was working approximately with 50cc cheilosis quality, and the patient was re-admitted to the hospital. The lipid profile was studied from the drain of the patient with the regimen closed. The triglyceride level in the drain fluid was found to be as high as 541 mg/dL (52-252 mg/dL). Daily drainage follow-up was performed in the patient who was on a lipid-free diet. The amount of drain in the patient's follow-ups gradually decreased, the content began to come to a serous character. When there was nothing in her drain on the 11th postoperative day, the drain was removed and the patient was discharged. Her pathology was reported as invasive lobular carcinoma, and in 4 of 24 dissected lymph nodes metastases was detected. The patient was admitted to the oncologic treatment protocol.

**Conclusion:** The chylous fistula is a complication that can mostly be seen in neck dissection, mediastinum and esophagus surgery and abdominal aortic aneurysm surgery. On the other hand, a very low incidence after axillary surgery has been reported in the literature. It has been suggested as a possible mechanism in the development of post-axillary dissection fistula in the literature, mostly in the view of anatomical variation. On the other hand, it may also be a risk factor that the axillary dissection is performed at a level III level in a radical manner. Although we have performed standard level I-II dissection in our case, we think that the cause of such a complication can be explained by anatomical variations. In the literature, conservative treatment has been proposed predominantly in chylous fistulas due to neck dissection or other surgical interventions. If the conservative method fails, primary suturing or ligation are also offered as a surgical procedure in the literature. We also performed conservative treatment primarily in our case; we put her on a lipid-free diet treatment. In a short time we observed that the amount of the discharge decreased and the content improved. We believe that successful control of the chylous fistula can be achieved by conservative methods such as dietary regulation.

**Keywords:** Axillary dissection, mastectomy, chylous fistula

## PP-0847 [Breast Diseases and Surgery]

# Advanced Stage Breast Cancer: A Rare Case Report

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**Introduction:** Breast cancer is the most common type of cancer in women. Although advanced stage breast cancer has a poor prognosis, owing to the efficacy of neoadjuvant chemoradiotherapy life expectancy can be increased today.

**Case:** A 40-year-old perimenopausal patient was admitted to a hospital with a complaint of swelling on the right breast 1 year ago. Upon the examinations, a mass about 8 cm in size was detected and trucut biopsy was reported the mass as invasive ductal carcinoma. The patient was scheduled for neoadjuvant chemoradiotherapy followed by surgery but the patient refused the treatment. 1 year later, the patient presented herself to the emergency unit in the hemorrhagic shock status with a necrotic, malodorous discharge and active hemorrhage with a size of 15 cm in the right breast. In the evaluation of the patient, her blood pressure was 90/50 mmHG, her pulse was 133/minute and her body temperature was 36 C. The patient's hemoglobin value was 5 gr/dL. The thoracic wall invasion, extensive liver and lung metastases were detected in the out-centered thorax and abdominal tomography. The patient was accepted as unresectable, hemodynamic resuscitation and local bleeding control were performed.

**Conclusion:** Although responses to the neoadjuvant treatment have been positive in patients with invasive ductal carcinoma, prognosis is significantly affected by the patient's participation in the treatment process.

**Keywords:** Breast cancer, advanced stage, invasive ductal carcinoma

## PP-0848 [Breast Diseases and Surgery]

## A Case of Isolated Hydatid Cyst of Breast

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Hydatid cyst is a parasitic disease that is mostly seen in endemic areas. It is an important health problem in our country especially in Eastern and Southeastern Anatolia Region. Hydatid cyst of the breast is very rare even in endemic areas and it constitutes only 0.27% of all hydatid cyst cases. It can be part of a common hydatid disease or it can be primary. Surgical treatment is the best treatment option. There are not many publications in the literature about hydatid cyst of the breast. Most of the reported cases were diagnosed postoperatively. It is not always possible to make a definitive diagnosis only by clinical examination and radiological tests. In this case we discussed the case of isolated hydatid cyst of breast in a 43-year-old woman.

**Keywords:** Hydatid cyst, breast, isolated

## PP-0849 [Breast Diseases and Surgery]

## Breast Conserving Oncoplasty Surgery Experience in a Young Breast Cancer Patient

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**Introduction:** The most common malignant tumor in women is breast cancer, accounting for about 30% of all cancers. Breast conserving surgery, which is a current approach in the treatment of breast cancer, involves a variety of aesthetic and oncologic problems. The oncoplastic surgical approaches that were first introduced in 1994 have the advantages: correction of cosmetic problems, reduction of mastectomy rates, sampling of the other breast, high quality of life and application of single session. Below is a discussion of our experience with oncoplastic surgery according to Wise's pattern in a 40-year-old patient.

**Case:** A 40-year-old woman was admitted to our department with a complaint of stiffness and pain in the right breast under areola for approximately 1 week. On physical examination, a hard mass of approximately 1 cm was detected at 2 o'clock position in the right breast under areola and excisional biopsy was performed on the patient. Upon the detection of malignancy in the biopsy, oncoplastic surgery was planned for the patient with Wise's pattern. No metastasis was detected in the preoperative staging of the patient. The patient's breast was marked with Wise's pattern by including the areola and mastectomy margins were determined. In the sentinel lymph node study pathology lymph node was not detected. After the mastectomy, the patient's breast was repaired with oncoplasty. Pathologic examination of the mastectomy specimen, including the areola, revealed infiltrative ductal carcinoma with grade 2, multifocal, peritumoral lymphatic invasion with negative surgical margins. The patient was discharged with healing without any additional problems during the follow-ups.

**Conclusion:** Oncoplastic surgery has several disadvantages in spite of its various advantages. In addition to the disadvantages such as the presence of aesthetic expectancy more than breast conserving surgery, the necessity of mastectomy due to the surgical margin positivity between 7-12%, longer operation time, delay of adjuvant chemotherapy onset periods in complicated cases, controversial algorithms and indications, the important obstacles of the development and implementation of these methods are the lack of publications with high value of evidence. The requirement of MRG in long-term survival data and follow-up is another important problem. Drawing with Grosman and Roudber Disc is the most commonly used method in our country. The skin marking using Wise's pattern is the most common method used in patients with macromastosis and it includes an incision of the areola circumference, a vertical incision to the lower breast line, and a horizontal incision below the breast. Its results with the Wise's pattern used as a traditional approach in reduction mammoplasty with suitable mastopexy are promising. There are publications reporting that it may also be performed after neoadjuvant chemotherapy in locally advanced cancers. However, it should be remembered that the knowledge and experience of the surgeon is very important because of the complex structure of the procedure and the possible complications.

**Keywords:** Mastopexy, breast cancer, breast conserving surgery, oncoplastic surgery, Wise's pattern

## PP-0850 [Breast Diseases and Surgery]

## Clinical Experience in Male Breast Cancer Patients

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**Objective:** Breast cancer is rarely found in men. However, the incidence of breast cancer is increasing in men as well as in women in recent years. We retrospectively reviewed the data of male breast cancer patients undergoing surgery in our study and evaluated the clinical and pathological features of the disease under the light of the literature.

**Material and Methods:** The files of 6 male patients with breast cancer were retrospectively studied. The patients were diagnosed and treated between January 2012 and January 2016 in Süleyman Demirel Faculty of Medicine Hospital Department of Surgical Oncology Clinic.

**Results:** The average age of the patients was 60.3 (min: 50-max: 69). The lesion was detected as 33.3% in lower external quadrant and 66.7% in subareolar region. In four patients, palpable lymph nodes were detected in the axillary and axillary was clinically negative in 2 patients. The 66.6% of the patients received the diagnosis of invasive ductal carcinoma, and 16.7% had the histopathological diagnosis of mucinous and micropapillary carcinoma. Modified radical mastectomy (MRM) was applied to all of the patients. The average tumor size was 2.3 cm (min: 1.5-max: 3), while approximately 30.5 lymph nodes were dissected in axillary dissection (min: 17-max: 40): 30) about 18.5 lymph nodes (min: 7-max: 30) were found to be metastatic. HER2 was positive in only one patient when all estrogen and progesteron receptors were positive in all patients.

**Conclusion:** Male breast cancer (MBC) constitutes a small proportion of all breast cancers and cancers found in men. However, due to the detection in advanced stage at the time of diagnosis, morbidity and mortality rates are high. Treatment is performed through modified radical mastectomy but breast conserving surgery and sentinel lymph node sampling might also be performed in early stage patients. However, 5-year survival is 40-65%.

**Keywords:** Male, breast cancer, surgery

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## PP-0851 [Breast Diseases and Surgery]

# Reverse Mapping with Fluorescent Method in Secondary Axillary Surgery

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**Introduction:** Lymphedema is a chronic and progressive process that its treatment is more difficult than prophylaxis. Since it is vitally important in terms of breast cancer prognosis, it is a sad complication that is encountered after the axillary sampling or dissection. Especially in secondary surgeries there is more risk. We aimed to demonstrate the protection of arm lymphatics by Indocyanine green (ICG) fluorescence reverse mapping in our secondary axillary intervention.

**Case:** A 28-year-old woman presented herself to the department of chest diseases with the complaint of swelling under the arm which had been there for 2 years but enlarged in the last month. While there was no palpable mass present in both breasts, from the upper external quadrant of the left breast to the axillary, a solid, mobile and partially painful lesion was palpated. On the USI control, a 4x4 cm solitary lesion extending from the upper external quadrant of the breast to the axillary was detected and a thick needle biopsy was performed accompanied with the imaging. Upon receiving the result as Schwannom, excision of the mass was performed by the neurosurgical clinic. Since the pathology result was adenosquamous carcinoma with surgical marginal positive low-grade, the patient was reevaluated by the tumor counselor and the decision of quadrantectomy and axillary dissection was taken. Under general anesthesia, 0.2 cc ICG was injected under the skin in 3 different places on the back of the left hand and lymph node dissection was performed by monitoring and maintaining the the arm lymphatics with the Novodaq Spy Elite Fluoroscopic Imaging System and upper external quadrantectomy was performed covering the old incision. The pathology a surgical margins were compatible with invasive adenosquamous carcinoma at a single focus with of at least 1 mm and 23/0 positive lymph node.

Axillary lymph node assessment has a critical role in breast cancer. In patients who were performed axillary dissection, lymphedema can be seen in different clinical series by 5-28%. The axillary dissection was not performed in the first attempt due to Schwannom thick needle pathology, but axillary dissection was caused by adenosquamous carcinoma of the final pathology. The dissection was performed by reverse mapping method due to the deterioration of the lymphatic channels extending from the papilla to the axillary. With this method, lymphedema that could develop in our patient was prevented.

**Conclusion:** We believe that the risk of other methods will be avoided by reverse mapping, which is performed with ICG and Fluorescent Imaging to prevent the development of lymphedema in secondary interventions to Axillary.

**Keywords:** Axillary dissection, reverse mapping, indocyanine green, fluorescence imaging

## PP-0852 [Breast Diseases and Surgery]

# Comparison of Pathology Results of Breast Cancer Cases via Preoperative Magnetic Resonance Imaging

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**Objective:** In breast cancer, Imaging methods provide the surgeons the opportunity to plan in order to obtain negative surgical margin prior to the operation in breast cancer. Thus, it is aimed to reduce additional surgeries and recurrences. Today, MR imaging is significant in terms of local staging of breast cancer. It provides important data on the tumor size, displacement of the surrounding breast tissue, insitu dimension, multifocality and multicentricity.

**Material and Methods:** The data of 282 patients who had been operated between January 2017-December 2017 at İstanbul University Faculty of Medicine, Breast Surgery Unit was evaluated retrospectively. The pathology results of the patients with multifocal, multicentric or insitu foci in MR reports and patients whose preoperative evaluation had been performed via MR were evaluated in detail.

**Results:** It was determined that 173 of 282 patients went through preoperative MR and 46 of these patients' MR were found to be suspicious in terms of multifocal, multicentric and/or insitu displacement. Of the 46 patients, 20 (53.5%) were performed breast conserving surgery (BCS), 26 (56.5%) had mastectomy. In the comparative evaluation of pathology and MR results, it was determined that MRI and pathology results were different 18 (39.1%) patients. While the findings in the MRI of 11 (23.9%) patients were suspected of multifocal disease, in the pathology specimen it was seen that the malignancy had single focal. When secondary USG was performed in 6 of these 11 patients, no pathology was observed in the additional foci in the MR. While 5 (10.8%) patients' MR showed single focal insitu displacement, pathology specimen showed multifocal tumor. In the comparison that was performed in terms of insitu focal assessment, it was observed that the MR of 5 (10.8%) patients had false negativity and 2 (4.3%) had false positivity. In the pathology evaluation of patients, it was determined that 25 had IDC, 4 had mucinous carcinoma, 2 had DCIS, 7 had combined type (IDC+ILC), 3 had ILC and 1 had metaplastic carcinoma. When the biological subgroups of the tumors were analyzed, 17 patients were in luminal A, 15 were in luminal B, 5 patients were in triple negative group.

**Conclusion:** In breast cancer, owing to the MR that was performed with appropriate techniques, the local distribution of the tumor is revealed and under the guidance of MR the rate of additional surgeries are decreased to a reasonable level. However, in order to prevent extensive resections that are related with false positivity, experienced breast radiologists and multidisciplinary studies with other imaging methods (USG, MMG, etc) are required.

**Keywords:** Breast, MR, multifocal, multicentric

## PP-0854 [Breast Diseases and Surgery]

# A Rare Mass in the Breast: Adenomyoepithelioma

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**Introduction:** Adenomyoepithelioma is a rare mass in the mammary gland. It is observed by 0.2% among the breast masses. The tumor is seen more frequently in the 5th and 6th decades, although it is seen between the 3rd and 9th decades. It is usually detected in the form of solitary mass or via mammograms. Adenomyoepithelioma may be benign as well as malignant. We intend to present an adenomyoepithelioma case in this report.

**Case:** A 55-year-old woman was admitted to our hospital due to a palpable mass on the upper external quadrant of the right breast. Since the mass was a single focal one and the patient had sufficient breast volume, the patient was performed segmental mastectomy. The pathology result of the patient was adenomyoepithelioma. In this case, adenomyoepithelioma, a rare cause of breast masses, is shared in the context of literature.

**Conclusion:** Physical examination and imaging methods of benign or malignant lesions of the breast are important in differential diagnosis. A rarely reported case of mammary adenomyoepithelioma in the literature has been demonstrated with pathological diagnosis in our case. The rare prevalence of differential diagnosis in the preoperative, and the absence of pathognomically distinctive features in other breast masses, the importance of pathological evaluation becomes prominent.

**Keywords:** Adenomyoepithelioma, mass, mammary mass

## PP-0855 [Breast Diseases and Surgery]

# When Evaluating the Sentinel Lymph Node in Breast Cancer, Do You Remove the Palpable Large Lymph Nodes in the Axillary?

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**Objective:** Sentinel lymph node biopsy is performed when there is no pathologic lymph node in terms clinically and radiologically in the axillary in the axillary staging of breast cancer. Sentinel lymph nodes can be detected by using either blue dye or radionuclide. During this procedure, suspicious lymph nodes (nonsentinel) in the region are removed which are not stained or without activity, but are large, solid and palpable.

**Material and Methods:** Records of patients who underwent surgery for breast cancer between January 2016 and December 2017 were investigated and of the ones who had undergone sentinel lymph node biopsies, those whose nonsentinel lymph nodes had been removed were examined.

**Results:** 82 patients were studied. Their average age was 56 (32-81) years. 66% of the patients were postmenopausal. Total mastectomy was performed in 27 patients and breast-conserving surgery was performed in 55 patients. About 1,5 (1-4) sentinel lymph nodes and about 1,4 (1-7) non-sentinel lymph nodes were removed. Metastases were detected in the sentinel lymph node in 15 patients during the operation. Metastases in the nonsentinel lymph nodes were detected in 5 patients, and the sentinel lymph nodes were also metastatic in all of these patients.

**Conclusion:** It has been determined that none of the lymph nodes removed as nonsentinel did not provide an additional contribution to the sentinel lymph node in none of the cases. When we consider that ultrasonographic axillary examinations are performed in pre-operative period, especially in each case, we think that it is an extra procedure that increases the morbidity and workload to remove palpable large lymph nodes, except for the sentinel lymph nodes.

**Keywords:** Breast, cancer, sentinel, lymph node

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## PP-0856 [Breast Diseases and Surgery]

# Is the Axillary Dissection Necessary If the Result is Positive When the Sentinel Lymph Nodes Are Negative?

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**Objective:** The pathologic evaluation and staging of the axillary region in breast cancer cases is an extremely prognostic indicator. Sentinel lymph node (SLN) is the first lymph node to receive the lymphatic flow in the axillary. In the case of SLNB with frozen tumor cells, axillary dissection is performed. Although frozen can be detected as negative in some cases, macrometastases in paraffin section can be found. The axillary dissection metastatic lymph nodes were investigated in patients whose result was negative in frozen but metastases were found in the paraffin section.

**Material and Methods:** Patients who had been operated between January 01, 2017 and December 31, 2017 and who had undergone SLNB from the armpit without tumor involvement in the frozen but with macrometastasis in the paraffin section were included in the study. Axillary dissection was performed through a second operation on the patients who were detected macrometastasis (invasion focus greater than 2 millimeters) in the paraffin section.

**Results:** In 16 of 120 SLNB patients, metastases in the paraffin section were detected, although no metastases were observed in the frozen during the operation. Six of these were micrometastases and no additional operation was required. In the axillary dissection of the 10 patients with macrometastasis, six metastatic lymph nodes were found in one patient and one metastatic lymph node in one patient, while no other metastases were detected in eight patients. All of the patients were discharged without complications.

**Conclusion:** It has been reported in a limited number of studies that although sentinel lymph nodes had been positive, patients who had been followed without axillary dissection had a few local recurrences. In our study, a small percentage of patients with axillary dissection encountered an extra metastatic lymph node. We believe that owing to the results of prospective randomized trials and the detailed evaluation of selected patients, axillary dissection will not be required in the future.

**Keywords:** Sentinel lymph node, metastasis, axillary dissection



## PP-0857 [Breast Diseases and Surgery]

## Is Axillary Dissection Required in Those with Positive Sentinel Lymph Nodes?

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**Objective:** Involvement of the axillary in breast cancer is an important prognostic indicator. Sentinel lymph node (SLN) is the first lymph node to receive the lymphatic flow in the axillary. If more than one lymph node is removed in SLNB and if macrometastasis is present in one of them, then axillary dissection is performed. Positive and reactive lymph nodes in the axillary dissection material of patients who had undergone multiple lymph node dissection through frozen and one metastasis was detected.

**Material and Methods:** Patients who had been operated due to breast cancer between 01.01.2017 and 31.12.2017 and who had had multiple lymph nodes removed during SLNB were included in the study. The dissection material of patients who had had been detected macrometastasis and thus undergone axillary dissection on the removed lymph nodes was examined.

**Results:** More than one lymph node was removed during frozen during operation in 18 of 120 SLNB patients. Three lymph nodes were removed in eight of the patients, two lymph nodes in eight, and four lymph nodes were removed in two patients. While all of the dyed sentinel lymph nodes were metastatic, no metastases were detected in the non-dyed ones. When the axillary dissection material of 18 patients was examined, an extra metastatic lymph node was detected in four patients while multiple metastatic lymph nodes were detected in the others. All of the patients were discharged without complications.

**Conclusion:** Although controversial, in patients with sentinel lymph node metastases follow-up might be recommended if more than one lymph node is removed from the frozen section. In our study that included a limited number of patients, metastasis was detected in all patients. For this reason, axillary dissection is still the gold standard for patients who had been detected metastatic lymph nodes in the frozen.

**Keywords:** Sentinel lymph node, metastasis, axillary dissection

## PP-0858 [Breast Diseases and Surgery]

## Early Stage Oncoplastic Breast Conserving Surgery Experience

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**Objective:** Oncoplastic breast conserving surgery is a modern surgical approach that enables reshaping breast tissue by using plastic reconstructive surgical techniques to achieve better aesthetic outcomes when treating breast cancer in the light of oncological principles. Local recurrence rates after oncoplasty surgery (OPS) are similar to those of breast conserving surgery. OPC allows a wider range of tumorectomy. Furthermore, in patients with macromastosis, breast can be minimized to prevent ray toxicity. In this article, we aimed to present the first results of our department in the field of oncoplasty surgery.

**Material and Methods:** Characteristics of patients with breast cancer who had undergone oncoplasty breast conserving surgery between October 2017 and January 2018 were retrospectively reviewed. Tumor localization and applied techniques were determined. Written consent was obtained from all patients. Aesthetic satisfaction is verbally rated as low, medium and good.

**Results:** In this period, 27 patients with breast cancer underwent oncoplastic breast conserving surgery. The average age was 53 (34-74). 55% of the patients were postmenopausal. When the tumor locations were examined, the upper external quadrant was in 15 patients (55%), the upper internal quadrant in 5 (18%) patients, the lower internal quadrant in 4 (14%) patients and the lower external quadrant in 3 (11%) patients. The average tumor size was 34 mm (20-60 mm). Pathologic examination revealed that 5 patients were in stage 1, 16 patients were in stage 2, 6 patients were in stage 3. In terms of tumor morphology; 23 patients (85%) had invasive ductal carcinoma, 3 (11%) patients had invasive lobular carcinoma in, and 1 (3%) patient had invasive cribriform carcinoma.

When we examined the oncoplastic breast conserving surgery techniques, 13 patients were treated with racket mammoplasty, 3 patients with vertical mammoplasty, 3 patients with round-block mammoplasty, 3 patients with lateral mammoplasty, 2 patients with J mammoplasty, 1 patient batwing and 1 patient with hemibatwing technique.

Hematoma developed in a postoperative patient, dissociation at the wound site and discharge in the form of fat necrosis developed in 2 patients. Twenty-five of the patients were discharged on the first postoperative day. Two patients were discharged on the second day. Patient satisfaction in the early period was: good by 90% and moderate by 10%.

**Conclusion:** Oncoplasty breast surgery improves patient satisfaction and facilitates breast conserving surgery. Studies show that post-operative breast deformities are reduced by half. We have seen in the early period results that patient satisfaction is good and the complications are acceptable.

**Keywords:** Oncoplastic surgery, cancer, breast

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## PP-0859 [Breast Diseases and Surgery]

# The Effects of Tumor Characteristics on the Treatment in Patients Receiving Neoadjuvant Chemotherapy

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**Objective:** In recent years, owing to the increased efficacy of chemotherapy, there has been a trend toward neoadjuvant chemotherapy in locally advanced breast cancers. Thanks to neoadjuvant CT, both breast conserving surgery is possible and chemotherapy activity can be controlled. In our department, we studied the role of tumor biology in neoadjuvant CT treatment in stage 2B and more advanced breast tumors.

**Material and Methods:** The regression rates of patients who underwent neoadjuvant CT and who underwent surgery after CT for locally advanced breast cancer between 01.01.2017 and 31.12.2017 were investigated.

**Results:** Of the 42 patients who had been given neoadjuvant, while full regression was determined in six patients, partial regression was found in thirty-six patients. When the pathologies of the patients with full regression were examined, it was determined that four patients were triple negative and two patients had hormone receptors negative c-erb 2 positive.

**Conclusion:** In patients with locally advanced breast cancer, the efficacy of neoadjuvant chemotherapy is increased, especially in triple negative patients, consistent with the literature.

**Keywords:** Neoadjuvant chemotherapy, regression, breast cancer, receptor

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## PP-0860 [Obesity]

# The Evaluation of Operative Complications in Obese Patients Undergoing Laparoscopic Sleeve Gastrectomy; Single Center Experience

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**Objective:** Our objective is to examine the complications developed during and after the operation in patients with laparoscopic sleeve gastrectomy for obesity treatment in our department.

**Material and Methods:** The clinical and demographic data of all the patients who had undergone bariatric surgery due to the diagnosis of obesity between April 2008 and June 2016 at KSU Faculty of Medicine, Department of General Surgery were examined retrospectively and hospital data system and patient files were used. The complications that were experienced during and after the surgery in 431 patients who had undergone laparoscopic sleeve gastrectomy. Complications were divided into 2 groups as preoperative and postoperative. Deaths within the first 30 days were considered operational mortality.

**Results:** As peroperative complication: It was detected that 13 patients had hemorrhage, 2 patients had leakage. In 51 patients one or more complications developed postoperatively. 20 patients had hemorrhage, 12 patients had leakage, 12 patients had pneumonia, and 10 patients had intraabdominal abscess, 5 patients had wound site infection, pulmonary embolism in 2 patients, necrosis of small intestine, portal vein thrombosis, myocardial infarction, small bowel perforation developed in 1 patient developed. Postoperative 6 (1.39%) patients had mortality.

**Conclusion:** Laparoscopic sleeve gastrectomy is the most commonly used, popular surgical procedure in the appropriate obese patient group. However, like every surgical procedure, the laparoscopic sleeve gastrectomy is not a completely innocent procedure.

**Keywords:** Laparoscopic sleeve gastrectomy, complication, obesity

## PP-0861 [Obesity]

# The Reliability and Efficacy of Laparoscopic Sleeve Gastrectomy in Patients Over 60 Years of Age

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**Objective:** Obesity is a disease that reduces the quality and duration of life. The most effective treatment for obesity is bariatric surgery. In this study, we aimed to present the results of early and mid-term weight loss and concomitant treatment of patients aged 60 years and over who had undergone Laparoscopic Sleeve Gastrectomy (LSG) in our department.

**Material and Methods:** Twenty-seven patients who had undergone LSG between September 2014 and January 2018 were included in the study. Demographic data of the patients, weight loss and the efficacy on the elimination of comorbid diseases of LSG were evaluated.

**Results:** Of the 27 patients who underwent LSG, 21 patients (77.77%) were female and 6 patients (22.33%) were male and their average age was 63.25 (60-72). Preoperative average body mass index (BMI) was determined as 48.64 (40.16-64). The average follow-up period was 19.14 (3-34) months, and the postoperative 12th month BMI was 33.82 and the 24th month BMI was 31.84. It was determined that 21 patients with hypertension and 15 patients with diabetes mellitus (5 patients who were using insulin) either stopped or decreased their medication 2 months after the operation. 1 patient (3.7%) due to hemorrhage in the stomach line and 1 patient (3.7%) due to rhabdomyolysis on the 20th postoperative day were treated conservatively. There was no leakage or mortality from the stapler line in any patient.

**Conclusion:** LSG; is one of the basic bariatric surgical procedures nowadays because of its acceptable rate of complications and its adequate weight loss it provides. The results of our study support bariatric surgery in elderly patients. These patients should not be denied surgery only because of their age. However, the patients should be informed in details about slightly increased risks and less satisfactory outcomes of the surgery.

**Keywords:** Sleeve gastrectomy, advanced age, treatment management

## PP-0862 [Obesity]

# Short-Term Results of Bariatric Surgery in Type 2 Diabetes Mellitus Patients

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**Objective:** Type 2 diabetes mellitus (DM) is a health problem that has become pandemic all over the world and has serious complications with psychosocial and economic dimensions if uncontrolled. Recently, bariatric surgery has been widely accepted because of its positive results in Type-2 DM treatment. In addition to short-term (reduced calorie intake) and long-term results (reduced fat mass and body weight) of bariatric surgery, it is thought to contribute to Type 2 diabetes remission, resulting in changes in glucose metabolism, insulin resistance and adipocytokine release. In this study, we aimed to present the results of 6 month follow-up of 20 patients undergoing laparoscopic mini-gastric bypass surgery due to Type 2 DM in our department.

**Material and Methods:** We included 20 cases who underwent laparoscopic mini-gastric bypass surgery due to type 2 DM. Preoperative and postoperative 6th month body mass index (BMI), body weight, fasting blood glucose (BMI), HbA1c level, and insulin use of the cases were compared. Vitamin B 12, folic acid levels were measured postoperatively. Categorical data were

evaluated in the SPSS 21.0 program. The significance test of the difference between the two pairs was used to compare the data.  $p < 0.05$  was considered significant.

**Results:** 10 of the cases were female, 10 were male and the average age was 51. 12 patients were on insulin preoperatively and 8 were on oral antidiabetic treatment. The average postoperative hospital stay was 5.2 days. In one case, anastomosis leakage developed and the patient was performed drainage and conservative treatment with antibiotherapy. When the averages of preoperative/postoperative values are compared; body weight decreased from 104 to 71; BMI from 37.5 to 25; HbA1c decreased from 7.1% to 6%; and Fasting blood glucose decreased from 195 to 108 and it was seen that the difference between these values was statistically significant ( $p < 0.05$ ). Only one of the preoperatively insulin-using patients continued to the insulin treatment and 2 of them moved on with the oral antidiabetic treatment. The indication of antidiabetic medical treatment has been eliminated in all cases who used to be on preoperative oral antidiabetic use. In the postoperative period, 5 of the cases developed vitamin B-12, 7 of them developed folic acid deficiency and the replacement for their deficiency was performed.

**Conclusion:** Laparoscopic mini-gastric bypass surgery, one of the modification techniques of bariatric surgery that is increasingly widespread in the world is a reliable method with positive metabolic effects even in the short term with cases diagnosed with Type 2 DM.

**Keywords:** Bariatric surgery, laparoscopic mini gastric bypass, type 2 DM

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## PP-0863 [Obesity]

# Factors Affecting the Cost of Laparoscopic Sleeve Gastrectomy Surgery

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**Objective:** Laparoscopic sleeve gastrectomy (LSG) is a surgical procedure with safe, easy and effective results in the treatment of obesity. The cost of LSG to hospitals is affected by many factors. This study aimed to determine the factors that affect the cost of LSG and whether there is a cost-effective procedure for the patients.

**Material and Methods:** Patients who underwent surgery for obesity between January 2016 and December 2016 were retrospectively screened from the hospital registry system. The demographic characteristics of the patients including age, gender, BMI, length of hospital stay, all the hospital costs that had been charged for medication, laboratory tests and radiological examinations, pathological examinations, blood product transfusions, all the bills charged to social security institution (SSI) and the package payment amounts for operation that had been purchased from SSI were recorded. All these amounts were totaled and total invoiced amounts were obtained. "Increased cost" and "Increased bill amount" were defined as the main outcome variables. The cost and billing amounts above 80 percentile were defined as "increased". With this method, 4 groups were formed as increased cost, normal cost, increased bill amount, normal bill amount. Patients' age, sex, BMI, total number of hospitalization days, requirement for follow-up in postoperative intensive care unit, and complication presence were compared within groups.

**Results:** During the study, 121 patients underwent LSG surgery due to obesity. Of the patients, 10 were males and 111 were females. The average age was 38.7 (19-62). When the BMI values were examined, it was observed that the average BMI was 47.6 (40-68). The total number of hospitalization days was 6.9 (3-71) days. When the total cost and total invoice amounts were examined, the average cost was 3633.5 TL. It was determined that the amount that corresponded to the 80 percentile for the total cost was 4120 TL and the patients with a cost over 4120 TL were included in the "increased cost" group. For the total invoiced amount, it was found that the amount that corresponded to the 80 percentile was 6095 TL and the patients who were billed above 6095 TL were included in the "increased bill amount" group. There was statistically significant effect of complication development and length of hospitalization on both increased billing amount and increased cost formation ( $p = 0.001, 0.001$ ). It was determined that age, sex, BMI and intensive care requirement did not have any effect on this condition ( $p = 0.563, 1, 0.509, 0.670$ ).

**Conclusion:** LSG may be considered as an effective procedure in terms of cost as well as a proven procedure in the surgical treatment of obesity. Patients' age, gender, BMI and need for postoperative follow-up in ICU do not increase the cost of surgery. The most important parameters for the increase in costs are postoperative complication development and long hospital stays. Reducing the complication rates after LSG and shortening the length of stay will reduce the costs of these operations.

**Keywords:** Obesity, laparoscopic sleeve gastrectomy, cost analysis

PP-0864 [Obesity]

## The Reason for Negative Laparotomy: Coil Embolization Case That Gives the Image of Raytex

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**Introduction:** Embolization is the process of stopping the blood flow in the vessels under control with medical reasons. Embolization is performed in case of a bleeding that can not be taken under control, in order to avoid a new operation in the postoperative hemorrhage situations, or in order to provide macroscopically shrinking by blocking the vessel that feed the tumor. In the embolization process, chemical substance or a small metal coil is placed in the vessel through a catheter where it is desired to be blocked. The coil embolization is a metal coil which is pushed through a thin microcatheter and blocks the vein by taking a ball shape when it is released. In this article, we aimed to present a case who had been performed coil embolization which led to negative laparotomy with the suspicion of presence of foreign body due to raytex image in standing abdominal X-Ray.

**Case:** A 46-year-old female patient was admitted to our department with the diagnosis of morbid obesity for sleeve gastrectomy operation. Laparoscopic sleeve gastrectomy was administered to the patient after necessary examinations. Blood vomiting and melana in the rectal touch were observed in the third postoperative day. Abdominal drainage did not show any pathological fluid. The patient whose anticoagulant treatment was stopped due to stapler line hemorrhage, was administered TDP replacement. Since the patient's bleeding did not stop during her follow-ups, she was administered coil embolization via interventional radiology. After the embolization, the general condition of the patient improved and the bleeding stopped and the patient was discharged with healing. On her first follow-up visit, standing abdominal X-Ray revealed an image compatible with raytex. The abdominal CT that was administered afterwards revealed mesentery contamination in the abdomen, and this was reported as secondary changes due to previous surgeries. The patient was performed laparotomy due to the suspicion of spongioma. There was no additional pathology in the abdomen during exploration. The lesion observed in the standing abdominal X-Ray was decided to belong to the coil embolization metal appearance. The patient was discharged with healing.

**Conclusion:** Sleeve gastrectomy, known as tube gastrectomy, is a type of obesity surgery performed in patients with a body mass index of 35 and above with mild obesity and in patients with morbid obesity with a body mass index of 40 and above. However, there are complications that can be seen after sleeve gastrectomy as in every operation. The most common complications are staple line leakage and associated fistula, deep vein thrombosis, infections, vitamin and mineral absorption disorders and hemorrhage. The bleeding is usually taken under control with anticoagulant therapy. In cases of when the hemorrhage cannot be taken under control, embolization or re-operation is among the treatment methods. In embolization, mostly coils, microparticles, gelfoam, N-butyl cyanoacrylate (glue), detachable balloons and vascular plugs are used. Coils are the emboligenes with various sizes and shapes have increasing effects on physical occlusion due to their metal structures and thrombogenic tendency due to their fiber structures. There are fibrils on it that facilitate clotting. It is usually used by simply pushing a guidewire into a vein from a microcatheter. It is important that they are visible after they are placed. For this reason, it is easily seen on direct graphs.

**Keywords:** Obesity, raytex, sleeve gastrectomy

PP-0865 [Obesity]

## A Rare Complication in Sleeve Gastrectomy Due to Nathanson Retractor: Hepatic Ischemia and Thrombocytopenia

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**Introduction:** Sufficient surgical view is essential if laparoscopic procedures are performed safely. In this case report, we discuss a case who had been performed laparoscopic sleeve gastrectomy (LSG) and developed hepatic ischemia and thrombocytopenia due to retractor are discussed.

**Case:** A 24-year-old female patient with a body mass index of 42 kg/m<sup>2</sup> was scheduled for laparoscopic sleeve gastrectomy. Liver left lobe was hypertrophic, its appearance was compatible with hepatosteatosis. The left lobe of the liver was excised

with a Nathanson retractor. During the stapler stage, the stomach mucosa was opened due to cardiac-level stapler firing, and this area was repaired primarily with suture. The operation lasted 140 minutes and the total blood loss was measured as 100 cc. Hemoglobin (Hgb) level was 12.1 gr/dl, white blood cell (WBC) and platelet (PLT) counts were respectively 15100 and 35000/mm<sup>3</sup>, ALT: 4681 UI/L, AST: 37 UI/L, GGT: 32 UI/L, ALP: 78 UI/L, LDH: 3375 UI/L, and INR: 1.5. On the postoperative 1st day the patient had excessive perspiration and developed tachycardia. Her PLT level was detected as 15,000/mm<sup>3</sup> in the citrated tube controls and the patient was performed immediate peripheral spread. The spread was in agreement with the real thrombocytopenia. No pathology detected in emergency ultrasound (USG), and the main vascular structures were evaluated as natural in the contrast-abdominal tomography (CT), and the perfusion of liver segments 2 and 3 was decreased compared to the other segments. In the patient whose present biochemical and radiological findings were compatible with ischemic hepatitis, low molecular weight heparin was discontinued because heparin-induced thrombocytopenia type 1 could not be excluded. The patient developed abundant vaginal bleeding on the same day. The patient was given a thrombocyte apheresis. The control tests performed 6 hours later revealed that while PLT was 55,000/mm<sup>3</sup> the ALT, AST and LDH levels were found to decrease by half. On the second postoperative day, the PLT count was spontaneously increased to 100,000/mm<sup>3</sup>, and the fall in the liver function tests continued. Patient's postoperative 7th day results were determined as PLT: 246000/mm<sup>3</sup>, ALT: 365 UI/L, AST: 38 UI/L and LDH: 118 UI/L and the patient was discharged on the same day without any problem. On the sixth day after discharge, the patient presented herself with stomach pain and upon the detection of leukocytosis in the patient ultrasonography was performed. The ultrasonography revealed no operation lodge and liver pathology. Doppler examination revealed normal left-lobe blood flow pattern. The contrast-enhanced abdominal tomography showed that perfusion of the liver segments 2 and 3 were still impaired, but the affected area was smaller. The patient was discharged following a one night follow-up.

**Conclusion:** When the literature is examined, liver retractors may lead to liver ischemia and disseminated intravascular coagulation. The risk factors for ischemia are prolonged surgery time (as it happened in our case), increased liver size and the reverse trendelenburg position, which is used in upper abdominal surgery. We think that it is important to intermittently release and displace the retractor in patients with these risk factors.

**Keywords:** Hepatic ischemia, bariatric surgery, nathanson retractor, thrombocytopenia

## PP-0866 [Obesity]

# Neuroendocrine Tumor in Sleeve Gastrectomy Specimen: A Case Report

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**Introduction:** Obesity is one of the biggest health problems in our country and in the world, and the number of obese individuals increases day by day, resulting in accompanying diseases, mortality and morbidity. Studies have shown that the only option in obesity treatment is surgical treatment, and after surgery all the samples were sent to the pathology unit and examined. We aimed to present our case in whom neuroendocrine tumor was detected in his pathology specimen after sleeve the gastrectomy performed in our department.

**Case:** A 37-year-old male patient referred to our outpatient clinic for morbid obesity. The patient with a body mass index of 50.7 kg/m<sup>2</sup> and no additional disease was included in the program of obesity surgery. The patient who had no pathology on his preoperative examinations was subjected to standard sleeve gastrectomy. The patient who did not develop any problems postoperatively was discharged without any problems on the 3rd postoperative day. In the pathological examination of the sleeve gastrectomy material; Two neuroendocrine tumors were observed in the dimensions of 6x4 mm and 4,5x3 mm. The tumor has passed the lamina propria and infiltrated the submucosa. Tumor cells were Keratin (+), Chromogranin-A (+), Synaptophysin (focal +) and CD56 (+) and Ki-67 proliferation index was around 12%. In the tumoral areas, eight mitoses were observed in 10 Large Growth Areas. In other areas, common intestinal metaplasia, chronic atrophic gastritis as well as neuroendocrine cell hyperplasia findings of linear and micronodular species were present and reported. The patient was consulted by with oncology clinic and was scheduled for a follow-up.

**Conclusion:** The importance of the surgery in the treatment of obesity is unquestionable and samples taken after the surgery should definitely be sent to the pathology unit. Additional pathologies that are missed during routinely examined specimens can be detected.

**Keywords:** Obesity, sleeve gastrectomy, pathology specimen, neuroendocrine tumor

PP-0867 [Obesity]

## Concurrently Performed Cholecystectomy with Sleeve Gastrectomy? Evaluation of 294 Cases

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**Objective:** Obesity is increasingly observed in the world and in our country, resulting in increased obesity related complications, morbidity and mortality. Laparoscopic sleeve gastrectomy (LSG) is the most frequently encountered surgical procedure in the surgical treatment of obesity. The association of obesity with colelithiasis is known and the incidence of colitis increases with weight loss after obesity surgery.

**Material and Methods:** Between 2014 and 2018, 294 obesity surgeries were performed in our department, of which 292 were sleeve gastrectomy and 2 were gastric bypass operations. The findings of the patients were retrospectively reviewed and preoperative abdominal ultrasonography records were recorded.

**Results:** Of the patients, 58 were male (19.7%) and 236 were female (79.3%). Between 18 and 64 years of age, body mass index (BMI) was 40-67 kg/m<sup>2</sup>. Forty-one patients (13.9%) were found to have cholecystectomy in the preoperative period. Colelithiasis was detected in 50 patients (16.8%). Of the 50 patients who had undergone sleeve gastrectomy, cholecystectomy was performed on 5 patients (10%) since it became symptomatic in the later period. Patients without any complications were uneventfully discharged on the 2nd postoperative day.

**Conclusion:** Although cholecystectomy is one of the most frequently performed operations in general surgery and complication rates are low, cholecystectomy with sleeve gastrectomy may lead to a greater destruction in terms of complication. We think that sleeve gastrectomy and cholecystectomy should not be performed at the same time in order to avoid the situation mentioned above and to give additional surgical burden to patients.

**Keywords:** Cholecystectomy, obesity, sleeve gastrectomy

PP-0868 [Obesity]

## Should Obesity Surgery be in The Curriculum of Resident Training? Evaluation of 294 Cases

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**Objective:** Obesity is one of the greatest public health problems in our country and in the world, and the number of obese individuals increases day by day and thus obesity associated concomitant diseases, mortality and morbidity increase. According to the TURDEP-II study conducted in 2014 in our country, 48% of women and more than 30% of men are overweight. In the same study, patients with type 2 diabetes mellitus constitute almost 10% of the population and the number of morbid obese individuals are millions. Studies show that surgery is the most effective treatment option in obesity treatment. Patients with severe comorbidities constitute the group of patients most benefiting from surgery.

**Material and Methods:** Between 2014 and 2018, 296 obesity surgeries were performed in our department, 2 patients underwent gastric bypass, and the remaining patients underwent sleeve gastrectomy. 58 of the patients were male (19.5%) and 236 were female (79.5%). Their age ranged between 18 and 64 years and body mass index (BMI) was 40-67 kg/m<sup>2</sup>. Two of our patients died on the first and third days postoperatively, and two of our patients had leakage. The leakage on two patients were taken under control through nitinol coated stent. 68 of our patients' procedures were primarily completed by our residents.

**Conclusion:** Obesity is increasing in our country and in the world and has almost reached a pandemic size. The number of obesity surgeries worldwide is around 350000 while in our country this number is around 15000-20000. Our residents have completed our cases under our supervision as primary. There was no surgical pathology in the postoperative period and the patients were healed and discharged. Therefore, we think that the obesity surgery should take part in the residency training program.

**Keywords:** Resident, resident training, obesity surgery, sleeve gastrectomy

## PP-0869 [Obesity]

# The Histopathological Findings of Duodeno-Ileal Bypass + Sleeve Gastrectomy with Single Anastomosis in Obese Rats and its Effect on Metabolic Hormones

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**Objective:** Obesity, one of the most important health problems of our time in recent years, forces the researchers to develop new surgical techniques and investigate mediators who are involved in nutrition. In obesity surgery, sleeve gastrectomy (SG) and gastric plication (GP) among the first laparoscopic surgeries are still being performed. Single anastomosed Duodeno-Ileal bypass + sleeve gastrectomy (SADI-S) is one of the restrictive and less absorbing surgeries and is a more up-to-date and safer modification of this highly effective surgery. We compared the mediators effective in obesity and stomach metabolism (ghrelin, leptin and gastrin), histopathological data (foveolar hyperplasia and cystic glandular dilatation) and weight loss rates in the gastric single anastomosis Duodeno-Ileal bypass + sleeve gastrectomy model (SADI-S) performed on rats and we aimed to determine the level of effectiveness of these operations.

**Material and Methods:** Wistar Hannover rats, who are obese according to their breed, were included. They were divided into 2 groups, 8 of which were SADI-S and 8 were the control group. Preoperative and postoperative body weight of both groups were measured. Blood samples were taken on the 30th postoperative day and gastrin, ghrelin and leptin levels were measured in both groups. After the sacrifice, their stomachs were totally removed and histopathologically examined.

**Results:** Significant weight loss was detected in the SADI-S group compared to the control group in the first postoperative month. While the decrease in blood ghrelin and leptin levels was statistically significant in the SADI-S group compared to the control group, blood gastrin level was found to be significantly increased compared to the control group. The histopathologically determined decrease in ghrelin and leptin levels in the SADI-S group was found to be statistically significant compared with the control group while the increase in gastrin level was found to be significant according to the control group. Histopathological examinations revealed a statistically significant increase in foveolar hyperplasia (FH) and cystic glandular dilatation (CGD) in SADI-S group compared to the control group.

**Conclusion:** As a result of complications that develop with concomitant diseases, morbidity and health care costs of obese patients are increasing. When the efficacy of the surgical methods used is discussed in terms of weight loss, we think that these methods will lead to controversy in the coming periods due to the probable problems that may arise in the long term. In our experimental model, SADI-S was found to be a more effective method in terms of weight loss compared to the control group, and it was found that FH and CGD, which has the potential to be seen together with stomach cancer, develop.

**Keywords:** Obesity, SADI-S, sleeve gastrectomy

## PP-0870 [Obesity]

# Upper Gastrointestinal Endoscopy Applied Before Sleeve Gastrectomy in Morbid Obese Patients: Retrospective Analysis of 460 Patients

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**Objective:** It was aimed to retrospectively evaluate the preoperative upper gastrointestinal endoscopy results of morbid obese patients for whom Laparoscopic Sleeve Gastrectomy (LSG) was planned in our endoscopy unit.

**Material and Methods:** The study was performed on 460 morbid obese patients who underwent upper gastrointestinal endoscopy before LSG at the General Surgery Endoscopy Unit of Keçiören Training and Research Hospital and their age, body mass index, comorbid diseases and endoscopy findings were evaluated. Antral gastritis, LES laxity, pyloric dysfunction, esophagitis, hiatal hernia, pangastritis and body mass index were evaluated by univariate analysis and logistic method comparatively.



**Results:** Upper gastrointestinal system endoscopy was performed in 460 patients for whom LSG was planned. 95 (20.6%) of the patients were male and 365 (80.3%) were female. The average age of males was 38.9 and the average age of females was 37.3. Male body mass index was 46.7, and female body mass index was 44.4. 293 (64%) patients had antral gastritis, 46 (10%) patients had pangastritis, 30 (6.6%) patients had esophagitis, 163 (35.6) patients had LES laxity, 58 (12.7%) patients had Hiatal Hernia, 25(5,5%) patients had pyloric dysfunction and 18 (3.9%) patients had comorbidities. Patients with antral gastritis had statistical significance with LES laxity and age (p 0,002, p 0,003), patients with pancreatitis had statistical significance with Hiatal Hernia, pyloric dysfunction and LES laxity (p 0.007, p 0.004, p 0.002). There is also statistical significance between esophagitis and hiatal hernia (p 0.001). In multivariate analyzes; Hiatal Hernia increased the risk of pancreatitis by 2.5 times, while LES laxity increased pangastritis risk by 0.42 times. Pyloric dysfunction has been shown to increase the risk of pancreatitis by 5.6 times. Age increased the risk of antral gastritis by 1.04 times, and LES laxity increased the risk of antral gastritis by 2.07 times. Finally, the presence of Hiatal Hernia increased the risk of esophagitis 10.65 times.

**Conclusion:** Obesity can lead to various gastrointestinal system pathologies. LSG is currently a widely used treatment protocol, especially in the treatment of morbid obesity. Upper gastrointestinal system endoscopy should be performed in patients before LSG in terms of upper gastrointestinal system (GIS) pathologies. We found antral gastritis and accompanying pathologies in 64% of the patients with upper gastrointestinal endoscopy before LSG. We believe that an upper GIS endoscopy that will be performed before the obesity surgery will play a very important role in the selection of the surgical methods to be applied.

**Keywords:** Laparoscopic sleeve gastrectomy, endoscopy, obesity

## PP-0871 [Obesity]

# The Effect of Anxiety Level on Postoperative Pain and Emesis in Bariatric Surgery

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**Objective:** State-Trait Anxiety Inventory (STAI) 1 and State-Trait Anxiety Inventory (STAI) 2 were developed by Spielberger et al. to assess state anxiety and trait anxiety levels (1970) (1). The aim of this study is to investigate the effect of the immediate and continuous anxiety on pre-and postoperative pain, nausea and vomiting in patients undergoing sleeve gastrectomy for bariatric surgery through the psychometric properties of the Turkish form of STAI 1 and STAI 2.

**Material and Methods:** The prospective cohort-specific study included 90 patients undergoing bariatric surgery within the age group of 18-65. Participants were asked to fill in the measurement and assessment inventory, which included both pre-and post-operative state and trait anxiety inventory and visual pain scorings. Post-operative state and trait anxiety inventory was applied at the 6th hour when the postoperative patient orientation and cooperation were provided. In addition, patients' nausea and vomiting were scored according to the Abramowitz nausea and vomiting scoring. Visual pain scoring and Abramowitz nausea-vomiting scales were measured twice at 6 and 24 hours. In this study, which examines the relationship between anxiety and pain, nausea and vomiting, All the patients included in the study were given the same protocol for all anti-emetic and analgesic medications used for postoperative pain, nausea and vomiting symptoms. Patients not complying with this protocol were not included in the study. In addition, considering the interaction of these drugs, which are used in medical treatment and seen as confusing factors in statistical analyses, with other investigated independent variables as primary outcome, variables found to be significant in univariate analyses were evaluated through multiple linear logistic regression.

**Results:** Based on an analysis of the effect of current anxiety levels of the patients using the state and continuity anxiety scoring inventory on visual analogue scale (VAS) and nausea and vomiting; Postoperative state anxiety levels were found to be effective on the 6th hour visual analogue scale (VAS), and preoperative continuous anxiety level was found to be effective on 24th hour VAS. The odds ratio of postoperative state anxiety score corrected by multiple linear regression according to visual pain score at 6th hour was found as AOR: 0.341, 95% CI (0.037,0.435). On the other hand, corrected odds ratio of Abromowitz nausea-vomiting intensity score according to 6th hour visual pain score was found as [AOR:-0.209,95% CI (-1.434,-0.056) (p: 0.034)].In addition, corrected odds ratio of preoperative continuous anxiety score as a result of multiple lineer regression according to 24-hour visual pain score was found as[AOR: 0,275, 95% CI (0.018, 0.317) (P: 0.007)]. Preoperative continuous anxiety intensity was found to be a factor increasing pain complaints at 24th hour.

**Conclusion:** This study has shown that the status and trait anxiety levels of bariatric surgery patients may be effective on post-operative pain complaints.

**Keywords:** Continuous and state anxiety scoring, bariatric surgery, pain, nausea and vomiting

## PP-0872 [Obesity]

# Is Specimen Histological Examination Necessary in Laparoscopic Sleeve Gastrectomy Procedure?

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**Objective:** Laparoscopic sleeve gastrectomy (LSG) for surgical treatment of morbid obesity has become an increasingly common method in recent years. In this method, a stomach part of about 1000-1100 ml volume is resected. Some of the studies evaluating this part of the resected stomach were reported to reveal incidental malignant lesions. The purpose of this study was to evaluate the histopathologic results of patients undergoing laparoscopic sleeve gastrectomy and to discuss the factors, if present, affecting the development of malignant lesions.

**Material and Methods:** Prospectively recorded medical data of 246 patients who underwent LSG surgery in a single academic center between January 2013 and October 2017 in accordance with the World Health Organization criteria were retrospectively reviewed.

**Results:** 72.4% of the patients were female. The mean BMI was 45,41 kg/m<sup>2</sup>. The most common pathological finding was gastritis. Incidental malignancy was detected in 3 patients and atrophic gastritis and diffuse intestinal metaplasia were detected in two patients (Graph 1). These findings were not found in the preoperative evaluations of malignant patients.

**Conclusion:** In recent years there has been a significant increase in the number of bariatric operations performed especially on people over 60 years of age. Obesity is a risk factor for malignancy development as well as for other systemic diseases. The incidence of malignancy in older people is higher than that of younger individuals. The fact that elderly obese patients are more frequently operated will cause encountering more malignant findings in their gastric histopathology. Since these malignant lesions are generally small and have subserosal locations, they have the potential to be overlooked in preoperative examinations.

All patients are advised to undergo endoscopic examination before surgery. Even if no pathologic findings are found on the endoscopic examination, mobilization of the posterior side of the stomach in LSG procedure and its examination in terms of subserosal lesions and the histopathologic examination of all gastric specimens after resection should be appropriate to avoid random malignancies.

**Keywords:** Obesity, sleeve gastrectomy, LSG, GIST, NET

## PP-0873 [Obesity]

# Our Laparoscopic Sleeve Gastrectomy Results

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**Objective:** Obesity is a health problem that reduces the quality and duration of life and is associated with many comorbid diseases. Today, morbid obesity is now regarded as a disease. Laparoscopic sleeve gastrectomy (LSG) is a more accepted surgical technique every day compared to conventional methods since it provides more effective weight loss in morbid obesity patients and high regression in comorbid diseases. We aimed to present the mid-term results of LSG operations applied in our clinic.

**Material and Methods:** 264 patients who underwent LSG in our clinic between April 2013 and January 2018 were included in the study. Patients between the ages of 18-60 and whose body mass index was over 40 kg/m<sup>2</sup> were evaluated preoperatively. All of the patients were taken into operation after their endocrine and psychiatric consultations were completed. Regularly recorded data of the patients before and after the operation were retrospectively reviewed.

**Results:** Of the patients, 214 (81.06%) were female, 50 were male (18.94%) and the mean age was 37.2 years. The average body mass index (BMI) was calculated as 45.2. The mean duration of follow-up was 27.5 months. 7 patient underwent sleeve gastrectomy + hiatus repair and 16 patients underwent sleeve gastrectomy + cholecystectomy. The mean operation duration was 98.5 minutes. The period of median oral intake was 1 day and median hospital stay was 3 days. No mortality was observed in the patients. 3 patients (1.1%) had leakage, and 2 patients (0.7%) had hemorrhage. Patients lost 14.3 kg in the first, 20.2 kg in the second, 25.9 kg in the third, 36.4 kg in the sixth, and 46.5 kg in the 12th. Month. Excess Body Weight Loss (EBWL) was 48.5% at 3 months, 67.1% at 6 months, and 83.7% at 12 months.

**Conclusion:** LSG has become one of the most preferred methods in the treatment of morbid obesity in our country and in the world because of its ease of administration, low morbidity mortality rates, short duration of operation and short hospital stay, as

well as very effective weight loss and metabolic control in patients. Over a period of 12 months, patients have recovered from an average of 83.7% of overweight and have significantly improved in comorbid diseases such as cardiovascular diseases, diabetes, hypertension, and sleep apnea. As longer period results are examined more accurate interpretations can be made and we think LSG is an effective and reliable method in obesity treatment in short and mid term.

**Keywords:** Obesity, laparoscopic sleeve gastrectomy, LSG, results

## PP-0874 [Obesity]

# Our Laparoscopic Roux-N-Y Gastric By-Pass Surgery Experience in Morbid Obesity Treatment

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**Objective:** Obesity is a health problem becoming increasingly widespread today. Today, it has been proven to be directly related to many comorbid diseases. It is known that it has significant negative effects on the quality and duration of life. The results of conventional methods are not encouraging. Currently, the most effective methods for obesity treatment are surgical modalities and Laparoscopic Roux-N-Y By-pass (LRYGB) surgery has been applied for many years in our country and in the world effectively. We aimed to present the results of by-pass surgeries we performed in our clinic.

**Material and Methods:** Thirty-two patients who underwent LRGB between April 2013 and December 2017 were included in the study. Patients between the ages of 18 and 60 who had a body mass index of over 40 kg/m<sup>2</sup> were taken into operation after their endocrine and psychiatric consultations were completed. Data collected regularly before and after the operation of the patients were retrospectively reviewed.

**Results:** Twenty three (71.8%) of the patients were female and 9 (28.2%) were male. The mean age was 42.5 years. The mean body mass index was detected as 48.3. Patients were followed for a mean of 24.3 months. The operations of 31 patients were completed laparoscopically. The operation was switched to open surgery in 1 patient. No mortality was observed in any of the patients, and 1 patient was operated again after the operation due to perforation in Y leg. The mean duration of operation was 195 minutes, median oral intake was 1 day and median hospital stay was 4 days. Patients lost 14.7 kg in 1st, 20.3 kg in 2nd, 25 kg in 3rd, 35.6 kg in 6th and 46.8 kg in 12th. month on average. Excess Body Weight Loss (EBWL) was 41.6% in the 3rd, 57.4% in the 6th, and 75.9% in the 12th month.

**Conclusion:** LRYGB is currently an effective treatment modality with low morbidity and mortality rates in obesity treatment. In our country and in the world, an effective treatment method of obesity other than surgery has not been developed yet. It has been observed in the literature and in our study that patients treated with LRYGB were recovered from overweight in the short term and had serious improvement in comorbid diseases. Our mortality and morbidity rates are similar when compared to the literature. We believe that all patients with LRYGB can be safely applied in all the patients with indication after the necessary preoperative preparations are meticulously completed.

**Keywords:** Obesity, LRYGB, laparoscopic, by-pass, roux-n-by-pass

## PP-0877 [Obesity]

# Our Results of Crurorafi in Hiatal Hernia Patients Diagnosed Before Obesity Surgery: 12 Patients

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**Objective:** Obesity has rapidly increased in recent years in the world and in our country, reaching a secret epidemic size. Surgery is the most effective and permanent method in its treatment. Many surgical methods have been defined and used in obesity surgeries. Laparoscopic sleeve gastrectomy (LSG) is preferred more frequently. The relationship between obesity and reflux has been proven by many scientific studies. The most common cause of reflux is hiatal hernia, which is more common in obese patients than in normal patients. The increase in intraabdominal pressure as a result of the increase of intraabdominal fat tissue and changes in dietary habits is also influential. In many studies, patients with LSG showed remission in GERD, but symptoms deteriorated. Symptoms of GERD after LSG may also occur in patients who have not previously experienced reflux. Post-operative symptoms of patients who underwent LSG and had hiatal hernia were evaluated.

**Material and Methods:** Twelve patients who underwent LSG + Crurorafi for morbid obesity and hiatal hernia between July 2017 and October 2017 were included in the study. Symptomatic patients with a hiatal hernia width of 2 cm and above were included in the study. Symptomatic evaluation was made according to Reflux Symptom Index (RSI) and DeMeester Symptom Scoring(DSS) preoperatively and at postoperative 1st month and 3rd months. Endoscopy was routinely performed in all of the preoperative obese patients. 2/0 non-absorbable polypropylene 1 or 3 one by one suturations were performed in the patients for the purpose of approaching intraoperative cruses. No mesh was used in the patients. Stomach-preserving treatment was recommended for 4 weeks postoperatively. No complications were seen in any patient.

**Results:** Seven of the 12 patients included in the study were female and 5 of them were male. The mean age was  $45\pm 3$ . The mean pre-reflux symptom index of the patients was  $21.25\pm 1.2$ , while the DeMeester value was  $4.6\pm 0.5$ . At month controls, there was a statistically significant decrease in these rates. (Mean RSI=7.3, DSS=1.4  $p=0.0016$ ). While a decrease was observed in 3rd month controls, no statistically significant difference was detected (RSI mean=4.5, DSS=0.75). While all of the symptoms regressed in 3rd month control in 7 patients only 1 patient's symptoms remained. It has already been observed that the GERD symptoms in 1st month control in 6 of the patients already showed a very high decline.

**Conclusion:** In this study, the number of patients was low, but when the symptom scores of patients who underwent LSG + Crurorafi were evaluated, it was found that the additional crurorafi provided a reduction in the symptoms of patients with pre-operative reflux symptoms. In the studies to be conducted with larger patient population, crurorafi can be safely performed as an additional procedure in addition to bariatric surgery to be performed in obese patients with reflux symptoms.

**Keywords:** Crurorafi, morbid obesity, sleeve gastrectomy, gerd

## PP-0878 [Obesity]

# Our Early Results of Sleeve Gastrectomy in Morbid Obesity

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**Objective:** The laparoscopic procedure called laparoscopic sleeve gastrectomy (LSG) is the removal of fundus and large curvature sides to form the gastric tube in the side of small curvature of the stomach. LSG accelerates the intestinal transit by accelerating the excretion of solid food and leads to a positive change in the hormones, thus when a reduction in ghrelin levels after gastric fundus resection is taken into consideration, it facilitates weight loss through restrictive and diminishing appetite. The advantages of LSG are the simplicity of its technique, the shortening of the operation duration and preservation of intestinal integrity and pylorus. It has been proven that LSG is extremely effective in reducing permanent weight loss and morbidity in short and medium terms, and can be compared to RYGB, the gold standard in bariatric surgery, in some ways. However, some questions regarding long-term outcomes of LSG should be answered; because there is limited data in long term studies. The aim of this study is to show the mortality, post-op mortality rates, and late complication rates of LSG patients in the 3-year period.

**Material and Methods:** 312 patients who underwent LSG in Cumhuriyet University General Surgery Department between May 2015 and December 2015 were retrospectively analyzed.

**Results:** 72% of the patients were female and the age range was 20-66 in all patients. The mean age was calculated as 42.7 years. The first 98 patients underwent routine endoscopy preoperatively, triple drug therapy was initiated according to the biopsy results and routine triple treatment was initiated for all the patients to be operated after 98 patients. LMWH and prophylactic 1 gr cephalosporin were applied to all of the patients at the 1st day preoperatively and anti-embolic socks were used in all the patients. LMWH treatment was continued for 7 days and antibiotherapy was continued for 3 days. The lowest BMI was 40 and the highest was 62.5. The mean duration of operation was 120 minutes in the first 50 cases, 72 minutes in the 50-100 cases and 51 minutes after the 100 cases, and 20 patients required post-op transfusion. Laparoscopic TISSEEL began to be used after the 148th patient, and afterwards no transfusion was needed in any patients. All patients underwent a leak test with per-op methylene blue, and one patient had methylene blue leak and the leaky line was repaired laparoscopically with 3/0 vicryl. Two patients underwent open surgery. Four patients had leak in the post-op period, 2 patients reoperated in our center and 2 patients were referred to the external center for endoscopic stents without being operated. No mortality was seen in any of the patients who underwent LSG. The length of stay at the hospital was the shortest 3 days, the longest 45 days, the mean hospital stay was 7 days. A re-sleeve gastrectomy was performed in a patient with LSG at the external center, leak was detected on the post-op 2nd day and the patient was referred the external center for stenting. Port site infection was seen in four patients. Forty-eight patients with

gastroesophageal reflux in the post-op period underwent endoscopy, and 15 patients had hiatal incompetence and underwent repair. According to the post-op pathologic results examined retrospectively, there was no significant difference in terms of H. pylori positivity in the patients who underwent endoscopy preoperatively and in the patients who underwent endoscopy post-operatively due to reflux complaint.

**Keywords:** Obesity, laparoscopic sleeve gastrectomy, result

## PP-0879 [Obesity]

# First in the Literature; Impact of Intraabdominal Abscess After Sleeve Gastrectomy: Rothia Mucilaginosa

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**Introduction:** One of the complications encountered after laparoscopic sleeve gastrectomy (LSG) is intraabdominal abscess. In this case presentation; management of a case of intraabdominal abscess developing due to a microorganism relationship of which has not been previously defined with LSG in the literature was reported.

**Case:** A-40-year old male patient 177 cm in height, weighing 155 kg (BKI: 49,4) and having no characteristics in his medical and family history was taken for LSG operation after appropriate preparation. With prophylactic 2 g cefazolin administration, he was followed-up postoperatively without developing any preoperative. His postoperative vital signs were stable and laboratory values were normal. The content of the serous drain was 100 cc on the postoperative first day, and 50 cc on the second day. On the third day, oral contrast-enhanced CT showed a hematoma with a perigastric depth of 2 cm and no leakage was observed at the anastomosis line. Following oral intake, he was discharged with LMWH prescription without developing any complication. On the postoperative 9th day there was an isolated tenderness in the epigastric region in the physical examination of the patient who was admitted to the emergency service with abdominal pain and fever and defense and rebound were negative. He had an ability to defecate. Laboratory values were Hb: 13,4 WBC: 18,1 CRP: 169. In the tomography taken; it was seen that the hematoma grew and there was free air flowing from between the stomach and hematoma to the epigastric region. He was hospitalized with diagnoses of leakage and abscess and empirical ciprofloxacin and metronidazole were initiated. Laparoscopic exploration decision was taken. The hematoma was aspirated, the sample was taken for culture from the fluid, the drain was placed and no gastric leakage was found. Postoperative vital signs of the patient had a stable course and there was no significant amount of content in the drains of the patient. Hb values were stable between 11.1 and 10.6. Daily post-operative infection parameters were; WBC: 13.2-11.8-9.7-8.7 CRP: 377-334-199-122 respectively. On reproduction of Rothia mucilaginosa in the preoperative culture taken, ertapenem and linezolid treatment were applied to the patient in view of the department of infectious diseases. Oral intake started on the postoperative fifth day. He tolerated it. Following the completion of the antibiotherapy on day 14, the patient was discharged.

**Conclusion:** Anastomosis line leakage and bleeding are the most common complications in LSG. Intraabdominal abscess development can be seen after anastomosis leakage. In this case, resource control, culture intake and initiation of appropriate treatment at the end of the antibiogram reduce morbidity and mortality. In general practice, E. faecalis and faecium, Staphylococcus epidermidis, C. albicans and P. aureginosa are generally identified in the postoperative intraabdominal abscesses. Rothia mucilaginosa is a rare gram positive coccus isolated intraabdominally and has been shown in only abscesses related with peritoneal dialysis in the literature and it is located in the normal flora of the oropharynx and respiratory system. This patient was able to be discharged healthily by reducing the comorbidities with efficacious treatment after the appropriate algorithm was followed. Since we could not find a study in the literature showing the relationship of R. mucilaginosa and LSG, we think that this is the first case presentation examining this issue.

**Keywords:** Intraabdominal abscess, peritonitis, postoperative exploration, rothia mucilaginosa, sleeve gastrectomy

## PP-0880 [Obesity]

# Case: Rare Location of Appendix After Bariatric Surgery

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**Introduction:** The development of incisional hernia in the trocar entry site is a complication of laparoscopic and robotic surgery and its incidence is reported to be 1% to 22%. Although incisional hernias developed from these defects can be asymptomatic, we encounter with severe clinical pictures up to strangulation.

**Case:** A 51-year-old female patient had a sleeve gastrectomy a year and a half ago. The patient who lost 105 kg was reoperated for abdominoplasty. Herniation of the Appendix vermiformis was observed in the subumbilical median trocar entry. Appendectomy was performed. No problems were encountered in the postoperative period.

**Conclusion:** When the trocar defects are not closed, patients may come with the pictures such as herniation of intestinal loop and rarely appendix vermiformis herniation. It is also envisaged that if the patient develops acute appendicitis, the patient may have serious changes in his clinical and physical examination findings. The closure of trocar defects in the light of this information is thought to reduce the incidence of incisional hernia in the later period.

**Keywords:** Bariatric surgery, abdominoplasty, appendix vermiformis, hernia

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## PP-0881 [Obesity]

# Difficulties That May be Encountered in Bariatric Surgery in Morbid Obese Patients With Liver Cirrhosis

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**Introduction:** The prevalence of obesity in the liver transplant population is increasing rapidly. It was aimed to demonstrate the difficulties that may be encountered in bariatric surgeries performed before transplantation in morbid obese patients with liver cirrhosis.

**Case:** Laparoscopic sleeve gastrectomy surgery was planned for a 52-year-old male patient with liver cirrhosis developed on hepatitis B background having body mass index of 41 kg/m<sup>2</sup> and Child-Pugh stage A, MELD score 10, and grade II esophageal varices at upper gastrointestinal endoscopy. There was enlargement of liver nodules and short gastric vessels in cirrhosis base in the operation we performed routinely with 5 ports. The stomach was released after liver exartation. During the posterior release of the stomach fundus, bleeding occurred when clipping the enlarged vein structures. After laparoscopic hemostasis, the operation was completed without any problems.

**Conclusion:** The limited number of studies in the literature suggest that optimal management of transplant candidates with morbid obesity and liver cirrhosis is controversial. In cases with BMI > 40 kg/m<sup>2</sup>, transplantation is not possible in most centers. Bariatric surgeries can be performed with low complication rates in cases where calorie restriction and dietary changes do not provide sufficient weight loss in comprehensive centers where transplantation is performed by experienced surgeons.

**Keywords:** Bariatric surgery, liver cirrhosis, obesity

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## PP-0882 [Obesity]

# “Gastro (Remnant)-Cutaneous Fistula Case and Management” After Sleeve Gastrectomy

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**Introduction:** Gastrocutaneous fistula case one of the rare complications after sleeve gastrectomy, and its management will be presented.

**Case:** A 34-year-old male patient with BMI 45 who admitted for exogenous obesity, underwent sleeve gastrectomy following preoperative preparations. Surgery was performed again immediately after stomach content came out from the drain of the patient whose abdominal and shoulder pain complaints started on the postoperative 2nd day and leakage was detected as a result of the test performed with methylene blue. At surgery, it was observed that there was decomposition at incisura angularis level in the sleeve line, and the defect was repaired by laparoscopy primarily. Four days after the second operation, the diffuse abdominal pain and septic findings occurred again and the patient was re-operated and laparotomy was performed. The reattachment of the suture line was seen again, and the pylorus was divided almost 5-6 cm proximal to the stomach staples and a single anastomotic mini gastric bypass was performed between the remnant stomach in the proximal and jejunum. After the third postoperative complaints rapidly regressed and the general condition improved, after discharge the patient complained of bilious discharge from the median incision line over the abdomen. As the expected fistula closure was expected to decrease as a

controlled fistula but the continuous drainage continued, the patient was admitted to our clinic one year after his first admission for fistula treatment. On the MR examination, which was performed by giving opaque material from the fistula tract, it was seen that the fistula was between the remnant stomach and the skin. During the operation, the tract was exposed by giving methylene blue to the external mouth of the fistula, and skin and remnant stomach tissue was resected from the pylorus level and the fistula tract was removed. At the same time, the incisional herniorrhaphy was added to the patient who had an incisional hernia. The patient was discharged without any problems on the fifth postoperative day.

**Keywords:** Obesity, fistula, complication

## PP-0883 [Obesity]

# Micronutrient Levels in Patients Undergoing Bariatric Surgery

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**Objective:** In our retrospective study we aimed to investigate the presence of micronutrient deficiency in patients undergoing bariatric surgery.

**Material and Methods:** Eighteen patients who underwent bariatric surgery by the same surgeon in Mersin University General Surgery Department between January 2016 and January 2017 and reached the target weight loss were included in the study. The mean age of the group consisting of 11 female and 7 male was  $39,33 \pm 11,68$  (minimum: 21, maximum: 55). Three patients underwent gastric bypass and 15 patients underwent sleeve gastrectomy. All the patients in the group were given nutritional solutions and vitamin preparations in the postoperative 1 month period. Their follow-ups were made with blood values in postoperative 1st, 3rd, and 6th months and 1st year. Micronutrients that were missing during the controls were replaced. The levels of micronutrient (hemoglobin, hematocrit, ferritin, albumin, vitamin D, folic acid, and vitamin B12) were compared in preoperative and postoperative 1 year follow-up. There was a statistically significant increase in vitamin D levels ( $p=0.037$ ). However, there was no statistical difference in terms of other variables ( $p>0,05$ ).

**Conclusion:** There was no decrease in nutritional parameters despite expectations after bariatric surgery. Possible micronutrient deficiencies can be prevented by the use of short term follow-ups and supplementary products.

**Keywords:** Bariatric surgery, D vitamini, micronutrient deficiency

## PP-0884 [Obesity]

# Complication Analysis After Bariatric Surgery: Single Center, 309 Patients

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**Objective:** Bariatric surgical applications with effective results in the treatment of obesity are accompanied by some complications. When these complications can not be managed, serious morbidities and mortalities can occur. Many surgeons remain distant from this practice because of the complications that may arise postoperatively. Surgeons who practice bariatric surgery need to have sufficient knowledge about complication management as well as surgical technique. We aimed to present complications after our bariatric surgery applications and treatment methods in our clinic.

**Material and Methods:** Bariatric surgery applications in our clinic between March 2015 and December 2017 were retrospectively reviewed. The demographic characteristics (age, sex) of the patients, the type of surgery applied, the number of days of hospitalization, the complications after surgery and the treatment methods of these complications were recorded. The obtained data were also grouped by years.

**Results:** 309 patients underwent bariatric surgery between March 2015 and December 2017 due to obesity. 258 of the patients were female (83.5%) and 51 were male (16.5%). 299 patients had sleeve gastrectomy and 10 patients had transit bipartition operation. Complications were not observed in 292 patients (95%) and complications occurred in 16 patients (5.2%). Three patients (0.9%) were found to have postoperative leakage. Leakage was taken under control by endoscopic stent and percutaneous drainage methods. Postoperative stenosis was detected in 3 patients (0.9%). In 2 of these patients, stenosis was seen to appear

due to technical reasons and it was treated with endoscopic dilatation methods. In 1 patient, functional stenosis due to postoperative alkalosis was observed. Firstly, endoscopic methods were used for treatment, and heller myotomy was applied because of not being successful. There was postoperative bleeding in six patients (1.9%). Infected hematoma was determined in 5 of them, and treated with percutaneous drainage. One patient (0.3%) developed portal vein thrombosis postoperatively and was treated conservatively with anticoagulant medication. Enterocutaneous fistula due to evisceration developed in one patient who underwent open surgery due to previous laparotomies, and local nutrition of the fistula was provided and nutrition of the patient was regulated. The patient was treated with partial resection of the small intestine at 6th months. Two patients (0.6%) developed postoperative early period atelectasis and respiratory exercises were sufficient. One patient (0.3%) developed mortality due to non-surgical comorbid causes. 1 stenosis in 37 patients in 2015, 3 leakages, 1 stenosis, 5 major bleedings, 2 atelectasis in 116 patients in 2016 and 1 stenosis, 1 major bleeding, 1 portal vein thrombosis and 1 enterocutaneous fistula occurred in 156 patients in 2017. One patient had a mortal course due to comorbid reasons.

**Conclusion:** Various complications arise after bariatric surgery. Leakage, stenosis and bleeding are the most known complications. It is also possible to encounter rare complications such as portal vein thrombosis and enterocutaneous fistula. It is possible to obtain effective and safe results when management of complications after bariatric surgery is done as required.

**Keywords:** Bariatric surgery, complication, complication management

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PP-0885 [Obesity]

## Laparoscopic Sleeve Gastrectomy Application in Patients with Laparotomy History

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**Objective:** Bariatric surgical interventions are among the most common surgical interventions in recent years.

While there are different types of procedures, sleeve gastrectomy is the most common intervention performed in Turkey and in the world. Although previous abdominal surgery is not a contraindication to laparoscopic sleeve gastrectomy, due to the thickened abdominal wall with obesity and adhesions that may be due to past surgery, these patients may experience difficulties in performing the planned surgery due to the entry of the initial trocar and intraabdominal adhesions. In this report, we present the results of patients with previous laparotomy history in our clinic and who underwent sleeve gastrectomy.

**Material and Methods:** Patients undergoing sleeve gastrectomy and previously undergoing laparotomy into the supraumbilical region for any reason were included. Patients with a history of laparoscopic surgery and who underwent laparotomy with pfannenstiell or subumbilical midline incision were excluded. Medical histories, operation findings and follow-up data were taken from the patient files and recorded. First trocar was applied with open technique as surgical technique.

**Results:** Twenty-one patients were included in the study. Of these patients who underwent complete sleeve gastrectomy, the rate of these patients was 6%. 19 (90.5%) of the patients were female and 2 (9.5%) were male. The ages of the patients were 25-60 (mean 47.2) and the duration of the operation was 42-98 (mean: 64.8) minutes. The most common causes of laparotomy were cholecystectomy (right subcostal or supraumbilical midline incision), hysterectomy with supra- and sub-umbilical midline incision and appendectomy. In addition, 4 patients were treated with graft repair due to incisional hernia. There was no pathology developed due to adherence during entry to trocar and surgeries in any patient. When we compare the duration of operation for 100 patients who did not have laparotomy history and for whom we applied sleeve gastrectomy it was determined that the duration of operation was longer than the patients with no laparotomy history.

**Conclusion:** Laparoscopic sleeve gastrectomy is a common surgical procedure. It was observed in our study that laparotomy was performed mostly due to cholecystectomy. In many patients undergoing bariatric surgery, the vast majority of these patients are female patients. Being female and obesity are risk factors for cholelithiasis. For this reason, the most common cause of laparotomy is cholecystectomy. Previous laparotomy is not an obstacle to laparoscopic sleeve gastrectomy. Open entry of the first trocar and intra-abdominal adhesions can lead to a long operation duration. We believe that laparoscopic sleeve gastrectomy can be performed safely with a careful surgical approach in these patients.

**Keywords:** Laparoscopic sleeve gastrectomy, laparotomy, bariatric surgery

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PP-0886 [Obesity]

## The Efficacy of Tisseel Application on the Stapler Line in Laparoscopic Sleeve Gastrectomy



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**Objective:** Bariatric surgical interventions are among the most common surgical interventions in recent years. While there are different kinds of procedures, the most common intervention performed in Turkey and in the world is sleeve gastrectomy. Sleeve gastrectomy has been performed worldwide for over 15 years, and standards in many issues have not yet been established. One of these is the application of a stapler line reinforcement to the stapler line to reduce the risk of bleeding or leakage. In our clinic, there is no other application besides tisseel on the stapler line. In this study, the results of the patients for whom Tisseel fibrin sealant on the stapler line was applied and not applied were compared and the benefit of tisseel use was questioned.

**Material and Methods:** The patients who were operated in the department of general surgery in Antalya Training and Research Hospital due to morbid obesity were included. Patient and surgical information, postoperative follow-up and complication information were recorded retrospectively from the patient files. All operations were performed by the same general surgeon. Two groups were treated with sleeve gastrectomy using the same surgical technique. Tisseel application was done to include all stapler lines in patients for whom Tisseel was applied. No application was made to the stapler line in the patients without Tisseel. Patients were divided into two groups: patients who received Tisseel (group 1) and those who did not (group 2).

**Results:** Forty seven patients for whom tisseel was applied and 47 patients for whom not applied were included in the study.

The age and gender status of the patients were similar. The mean duration of operation was 57.4 (31-95) in group 1 and 53.7 (35-88) min in group 2. No leakage was observed in the two groups after the operation, whereas bleeding necessitating blood transfusion developed in 2 patients in the group not applied tisseel. No additional morbidity and mortality was observed in any patient except bleeding

**Conclusion:** Many studies on sleeve gastrectomy have reported that a number of treatments have been performed to strengthen the stapler line, but none of them are clearly beneficial. In our study bleeding was observed in 2 patients in whom tisseel was not applied on the stapler line. There was no difference in terms of other complications. We conclude that tisseel application on stapler line can be effective to prevent bleeding but we think that the number of patients included in the study should be increased to observe its effect on leakage.

**Keywords:** Laparoscopic sleeve gastrectomy, bariatric surgery, stapler line strengthener

**PP-0887 [Obesity]****Do We Perform Sleeve Gastrectomy Correctly? A Case Presentation With Resleeve Gastrectomy****Burhan Mayir, Onur Özener, Yaşar Çöpelci, Barış Özkara, Hülya Evrim Özak***Heath Sciences Unviersity Antalya Training and Research Hospital, Antalya, Turkey*

**Introduction:** Sleeve gastrectomy is the most commonly performed bariatric surgical procedure worldwide. It is performed more commonly in our country since it can be performed in a shorter time and with less experience than other bariatric surgical procedures. In this case report, we present surgical findings of a patient who had previously undergone sleeve gastrectomy but was operated by us because of the lack of weight loss.

**Case:** A 67-year-old female patient admitted us with a complain of not being able to lose weight despite having undergone sleeve gastrectomy 7 years ago. The patient stated that she had lost 13 kg in the first month after the first operation, but did not lose any weight in the following months, and gained the weight she had given. When the patient was questioned, she stated that she could eat the amount starting from the month after the operation. She did not have any comorbid disease but it was learned that she had diffuse knee pain. When the patient admitted, her height was 153, weight was 98 and body mass index was 41.9. It was seen in the endoscopic examination of the upper gastrointestinal system that the stomach was in normal size and there was fundus. The patient was scheduled for laparoscopic surgery. It was observed that the antrum was healthy in the surgery performed with 4 trocars. It was seen in the dissection towards fundus starting from here that resection was started from 10-12 cm proximal of the pylorus with first stapler and the stomach was resected for 10 cm along fundus. Not much adhesion was observed in fundus and antrum. There was adhesions only in corpus. After dissections performed, it was observed that fundus and antrum were never released and no resection was done in these regions. The patient was scheduled for sleeve gastrectomy again. Stomach large curvature was completely released from the fundus to pylorus. Sleeve gastrectomy was performed starting from 2 cm proximal of pylorus through the orogastric tube. The macroscopic view of the removed stomach specimen revealed that only a resection was made from the corpus region, no resection was performed from the fundus, and the first surgical procedure was thought to be performed inadequately. Oral fluid intake was initiated on the first day after the operation and the patient was discharged without any problems on the third postoperative day.

**Conclusion:** Sleeve gastrectomy is a very popular surgical procedure in our country as well as in the world. Corpus and antrum, and especially the fundus should be included in to the resection in sleeve gastrectomy. This requires complete release of the large curvature of the stomach. Here, dissection and complete release of the fundus are important because of technical difficulties. Insufficient dissection and post-resection may result in the failure of the intervention.

**Keywords:** Sleeve gastrectomy, resleeve gastrectomy, bariatric surgery

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## PP-0888 [Obesity]

# The Effect of Laparoscopic Sleeve Gasrectomy on the Quality of Life: Before and After

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**Objective:** Obesity means that the body mass index is over 30kg/m<sup>2</sup>. Obesity is increasing in Turkish society, as it is in many countries. Studies have shown that obesity decreases the quality of life of individuals significantly. When decrease in physical capacity, pain, deterioration in interpersonal relations, decrease in self respect, loss of self confidence, depression, social labeling, difficulty of finding job and rejection from the school and work environment are taken into consideration, it is understood that the health-related quality of life of obese individuals is so low. Laparoscopic sleeve gastrectomy (LSG) is a popular, safe, frequently used and effective bariatric surgical method for patients and surgeons. There are few studies in the literature, showing the negative effect of obesity on quality of life and improvement in bariatric surgery. The aim of our study is to assess the effect of LSG on the quality of life of patients.

**Material and Methods:** 50 patients who underwent LSG due to morbid obesity (BMI 40 kg/m<sup>2</sup>) in the General Surgery (Group D) of İzmir Katip Çelebi University Atatürk Training and Research Hospital were included in the study. WHOQOL-BRIEF which is short form of World Health Organization life quality scale was applied before and after LSG for the patients included in the study. WHOQOL-BRIEF included a total of 26 questions, including two questions, one of which is the general perceived quality of life and the other perceived health status. LSG was applied to all of the patients by the same surgeons.

**Results:** Of the 50 patients included, 38 (76%) were female and 12 (24%) were male, and the mean age was 43.67±8.34 years (range: 20-65 years) and mean BMI was 47.4±10.65 kg/m<sup>2</sup> (range: 40.0-61.6kg/m<sup>2</sup>). There was a statistically significant relationship between BMI and physical health status, psychological state and social communication status before LSG with one increasing and the other decreasing at the rates of 72.9%, 49.2% and 29.7%. Thus, as BMI increases health status, psychological status and social communication status decrease. There was a statistically significant relationship between age and pre-LSG physical health status and pre-LSG psychological status at the rates of 30.3% and 28.4%. There was a statistically significant relationship between age of female and only pre-LSG psychological state at the rate of 53.4%. When we look at BMI, there was a statistically significant difference in pre-LSG physical health status and pre-LSG psychological status in women at the rates of 69.6% and 49.7%. While there was no statistical significance between age and groups in males, statistically significant difference was detected between physical health status before and after LSG with BMI at the rates of 82.4% and 68.5%. While there was no relationship between age and any group in single patients, there was statistical significance between physical health status, psychological status and environmental status before LSG with BMI at the rates of 75.4%, 85.2% and 73.3% respectively. While there was no relationship between age and any group in the married patients, there was statistically significance between physical health status, psychological status and general health status before LSG in terms of BMI at the rates of 72.3%, 33.9% and 34.4%, respectively.

**Conclusion:** As a result, laparoscopic sleeve gastrectomy severely helped them to lose excess weight in morbid obese patients and dramatically improved their post-operative quality of life, and a significant improvement in all post-LSG correlations was achieved.

**Keywords:** Obesity, World Health Organization quality of life scale-short form, laparoscopic sleeve gastrectomy

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## PP-0889 [Obesity]

# Our Laparoscopic Sleeve Gastrectomy Results in Obstetric Surgery Treatment

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**Objective:** Laparoscopic Sleeve Gastrectomy is a widely used form of treatment for obesity. The most feared complications are leakage and bleeding. The overall complication rate of LSG is reported to be 0-24%, the leakage rate from stapler lines is 0-5.3% and the mortality rate is 0.39%. We evaluated the retrospective early results of patients in whom LSG was applied in our clinic.

**Material and Methods:** The demographic characteristics and early results of 32 obese patients who underwent LSG between December 2016 and February 2018 were evaluated in our clinic. Body mass index (BMI) of patients aged 20-65 years is  $45 \pm 3$ . Male/female ratio was 9/23. All patients were evaluated preoperatively with the consultation of Psychiatry, Endocrinology, Cardiology and Chest Diseases. They had no comorbid features. A 21 year-old patient with epilepsy was consulted to the department of neurology. All patients were evaluated by performing gastroscopy in our clinic. Incidentally, stromal tumor was detected in 1 stomach specimen. All patients underwent LSG. A 14 mm Hg pneumoperitoneum was formed using 4 trocar and liver ecarteurs. Gastrectomy was performed by using 6 staples on average (2 green, 1 yellow, 3 blue). Later, the leakage control was made by methylene blue. Subsequently, 1 Jackson Pratt drain was placed on the stapler line. The mean duration of surgery was 75 minutes. On the first postoperative day, leakage control was performed by drinking methylene blue. On the second postoperative day, the drain was withdrawn and oral intake was started.

**Results:** Thirty one patients did not develop any postoperative problems. Patients were discharged on the fourth postoperative day. Postoperatively, 1 male patient was treated with methylene blue, and methylene blue appeared in the leakage control. Leakage was observed from the fundus in the oral contrast Abdomen BT. The general condition was not deteriorated and the patient was observed conservatively. No problem developed in the follow-up. Oral intake started and the patient was discharged on the 10th postoperative day. All of the patients were controlled in postoperative 1, 3, 6 and 12 months.

**Conclusion:** LSG for obesity treatment is safely applied with low morbidity and mortality rates in centers with appropriate indication and 3rd grade intensive care units.

**Keywords:** Obesity, laparoscopy, sleeve, leakage

## PP-0891 [Obesity]

# Can Laparoscopic Sleeve Gastrectomy Increase the Quality of Hemodialysis in a Patient with Morbid Obesity?

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**Introduction:** The incidence of obesity in hemodialysis patients due to chronic renal failure is reported to be approximately 25%. There is a positive correlation between the obesity and the comorbidity indices reflecting the mortality in the studies performed. Cardiovascular risk was detected to be higher in obese patients entering hemodialysis. Encountering AV fistula problems more commonly, more interdialytic weight gain, higher erythropoietin requirement and anemia are other problems among patients with BMI > 35. It is also widely known that obesity is an obstacle to kidney transplantation. Postoperative metabolic and laboratory findings of an hemodialysis patient with sleeve gastrectomy will be presented here.

**Case:** 31-year-old female patient with BMI: 48 kg/m<sup>2</sup> has been on dialysis treatment for the last 5 years due to renal failure. She admitted to our clinic because she needed to lose weight in order to be taken to the transplantation program. Following necessary preparations, the patient underwent laparoscopic sleeve gastrectomy. Was calculated to be 1,5 hours and bleeding to be 30 cc. There were no preoperative or postoperative complications. On the second postoperative day, oral intake started following the leak test. She was discharged on the postoperative 3rd day. The routine dialysis program continued as long as the patient was in the hospital. Hemoglobin values of the patient did not increase despite high-dose erythropoietin prior to surgery, and she did not require erythropoietin after weight loss. While interdialytic weight gain was over 5000 gr, interdialytic weight gain decreased to 2000 gr. The patient's dialysis frequency was reduced from 3 to 2 per week, with an increase in quality of life, especially in sexual functions. The patient was placed on the transplantation waiting list.

**Conclusion:** Postoperative hemodialysis and quality of life of the patient improved after weight loss in a morbidly obese patient with hemodialysis.

**Keywords:** Chronic renal failure, dialysis, morbid obesity

## PP-0892 [Obesity]

# Laparoscopic Sleeve Gastrectomy as Revision Surgery after Gastric Band

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**Introduction:** Gastric band application is a bariatric surgical method that has lost popularity today. Age, sex, body mass index, duration of gastric band, duration of postoperative follow-up and hospitalization duration of patients in whom revision was made from gastric band to sleeve gastrectomy performed in two different centers were reviewed retrospectively in this review.

**Case:** The mean age of the 6 patients included in the study was 35.3 (27-53) years. Female/male ratio was 2 (4/2). Pre-operative mean BMI was 35.3 (39-47). The mean gastric band duration was 7 years. Laparoscopic sleeve gastrectomy was performed by removing the gastric band from all patients. Duration of hospitalization was 3 days. There was no post operative complication. The mean postoperative follow-up period was 28 months. Postoperative BMI fell to 28.3 kg/m<sup>2</sup>.

**Conclusion:** Laparoscopic sleeve gastrectomy is a bariatric surgical method that can be used in revision surgery if there is not enough weight loss in patients who have previously had gastric band.

**Keywords:** Gastric band, sleeve gastrectomy, morbid obesity

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PP-0893 [Obesity]

## Splenic Vein Thrombosis with Superior Mesenteric Vein after Laparoscopic Sleeve Gastrectomy

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**Introduction:** We aimed to emphasize that portal venous system thrombosis, which is a complication of bariatric surgery, is a rare but serious complication.

**Case:** A 34-year-old female patient was admitted to laparoscopic sleeve gastrectomy (LSG) program with BMI 41. Low-molecular-weight heparin was applied to the patient 12 hours before the operation whose preoperative preparations were completed. Patient who underwent LSG was discharged from the hospital without any preoperative and postoperative complication by arranging 2 weeks low-weighted heparin treatment on the postoperative 5th day.

The patient was admitted to our clinic in emergency condition with complaints of abdominal pain radiating to the back and nausea in the 5th week postoperatively. Leukocyte and CRP elevations were observed in the laboratory parameters and defense(+) and rebound (-) were observed in right upper abdomen in the physical examination. There were splenic infarcts and thrombosis in splenic vein and superior mesenteric vein on the contrast-enhanced CT scan. The patient's oral intake was stopped, iv liquid, double broad spectrum antibiotic, and low molecular weight heparin in the therapeutic dose were initiated. The patient was discharged with low molecular weight heparin at the treatment dose on the 14th day with her tolerating oral feeding after a treatment of 10 days.

**Conclusion:** Diagnosing the complications occurring after bariatric surgery correctly and as soon as possible is crucial in order to decrease the morbidity and mortality. Among these complications, splenic venous thrombosis and superior mesenteric vein thrombosis are rare but very serious complications. It can lead to severe thrombosis progression, portal hypertension, infarcts in the small intestine, and consequent necrosis of the small intestine if not treated in time. It should not be forgotten that vascular thrombosis may be present in the differential diagnosis when complaints of severe abdominal pain, nausea and vomiting are seen in patients who have had bariatric surgery and are at risk for thrombosis (height of BMI, smoking history, limitation of movement...). Contrast-enhanced CT having a diagnostic value of 90% and over should be planned. There is not a definite common anticoagulant treatment protocol in cases with the diagnosis of portal venous system thrombosis however low molecular weight heparin at the first stage(1-3 months) at the treatment dose followed by coumadin therapy up to 6 months is recommended.

**Keywords:** Bariatric surgery, splenic vein thrombosis, anticoagulant treatment

PP-0894 [Obesity]

## Simultaneous Selective Cholecystectomies with Laparoscopic Sleeve Gastrectomy

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**Objective:** Laparoscopic sleeve gastrectomy (LSG) is one of the most used procedures in morbid obesity surgeries. The prevalence of gallstones in patients with morbid obesity is 19-45%. The management of gallstones during LSG is still a matter of debate. We aimed to present our cases of simultaneous cholecystectomy with LSG in our study.

**Material and Methods:** A total of 431 patients were hospitalized for the purpose of performing LSG in the İzmir Katip Çelebi University Atatürk Training and Research Hospital General Surgery Department and Health Sciences University Tepecik Training and Research Hospital General Surgery Department. Twenty-six patients who underwent simultaneous selective laparoscopic cholecystectomy (SLC) with LSG were included in the study. LSG indication was BMI  $\geq$  40 kg/m<sup>2</sup>. SLC term is understood as LC applied to the patients having no problem in LSG and no acute cholecystitis in whom cholecystectomy at exploration will be performed without any problem. Age, gender, BMI, preoperative ultrasonographies (USG) of gall bladder, type of surgery applied, duration of surgery, complications and duration of hospitalization of the patients were recorded. No additional trocar entry was applied in none of the patients undergoing simultaneous cholecystectomy with LSG.

**Results:** Twenty five(96%) of 26 (6%) patients included in the study were female and 1 (4%) patient was male. The mean age was 42.6 $\pm$ 1.02 and the mean BMI was 44.09 $\pm$ 2.12. The standard port entry locations for LSG were used for all of our patients. After the LSG was finished, grasper suspending the Hartmann's pouch was applied from the trocar with number 1, optical camera from the trocar with number 2, dissector from the trocar with number 3, energy device and clip applicator and grasper entry was provided in order to take the fundus of gall bladder in to the traction from the tractor with number 4. No additional port entry was required. Demographic BMI, operation duration, duration of hospitalization and mortality-morbidity rates were presented.

**Conclusion:** The coexistence of morbid obesity and cholelithiasis is seen in at a rate of 19-45%, whereas more than 25% of these patients undergo cholecystectomy prior to bariatric surgery. In our group, 8.4% of patients had coexisting morbid obesity and cholelithiasis. Simultaneous LSG and SLC were applied to 6% of these patients. Tucker et al. have reported in their studies that addition of cholecystectomy to the bariatric surgery prolonged the duration of operation 18 min (range 15-23 min). In our study, this time was 24.12 $\pm$ 3.45 min. Tarantino et al. have reported that application of simultaneous cholecystectomy with RYGBP prolonged the length of hospital stay and operation, but did not increase the risk of complications. In our study, it was seen that the length of stay in the hospital did not change but extended the duration of the operation. In their study, Warschkow R et al. concluded that 14.7% of patients had simultaneous cholecystectomy and that asymptomatic bile stones in bariatric patients could be reliably managed as in a non-obese population. Cholelithiasis is asymptomatic before bariatric surgery and it was observed that cholecystectomy was performed in 2.7-28.9% of the patients who did not undergo simultaneous cholecystectomy since cholelithiasis became symptomatic after bariatric surgery. In conclusion, while SLC simultaneously applied with LSG prolongs duration of operation it does not have any effect on mortality and morbidity. In addition, patients are saved from the second surgical procedure. However, it is known that simultaneous cholecystectomy with bariatric surgery is recommended for symptomatic patients, this issue is still controversial.

**Keywords:** Laparoscopy, sleeve gastrectomy, cholecystectomy

PP-0896 [Obesity]

## Nutritional Polyneuropathy After Bariatric Surgery

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**Introduction:** Today, it is increasingly accepted that the most effective treatment of obesity is surgery. Early and late complications of bariatric surgery may show differences depending on the surgical method and patient profile. The incidence of obesity is becoming increasingly endemic and the number of bariatric surgeries is increasing accordingly. Neurological complications can be seen after obesity surgery due to nutritional and mechanical reasons. The loss of subcutaneous tissue with more than 15% loss in body weight makes nerve fibers vulnerable to trauma. Two patients with postoperative nutritional polyneuropathy who underwent two surgical interventions of sleeve gastrectomy and gastric mini bypass with obesity diagnosis in our clinic were presented and the related literature was reviewed.

**Case 1:** A 20-year-old female patient had a BMI of 45 and had a HgA1c of 6.9. The use of metformin was tried but it could not be tolerated because of the gis side effects. 50 kg weight loss occurred in the first 6 months after laparoscopic mini gastric bypass. Bone BMI was found as 28.4. HgA1c was measured as 5.6. Vitamin, electrolyte and other laboratory findings were normal. Vitamin, electrolyte and other laboratory findings were normal after evaluation of the patient, who applied to our clinic due to weakness in the lower extremities, with our hospital's neurology team The patient was hospitalized in our neurology unit for advanced examinations. Electromyographic examination revealed asymmetric polyneuropathy with axonal degeneration. The patient was supported by Total Parenteral Nutrition and trace element after oral intake decreased. The current complaints of the patient regressed with daily pregabalin.

**Case 2:** A 42-year-old male patient had BMI: 42. Hypertension was present and he was using antihypertensive for 10 years. The patient who underwent laparoscopic sleeve gastrectomy procedure lost 58 kg in 8 months. The patient admitted with numbness in the lower extremities in postoperative 4th week. Laboratory abnormalities were not detected apart from laboratory findings of 25 OH Vitamin D and lack of ferritin. The patient was directed to the neurology clinic. The symptoms of the patient were completely regressed after the muscle strengthening training with the electrolyte replacement and electrolyte and vitamin levels reaching normal ranges.

**Conclusion:** Bariatric surgeon is accepted as a permanent solution of obesity and it is becoming a widespread surgery. Besides, it increases the number and variety of postoperative early and late complications. Noncompliance of the patients to the recommendations with the fast weight loss is accompanied by long term complications. Some of these complications are neurological problems. Nutritional neuropathy is one of these pathologies. The support of the patients in terms of exercise and imbalance after hospitalization dramatically improves the symptoms. In addition, the decline of fat tissue around the peroneal nerve due to weight loss in the early period causes the nerve to be faced with external pressure. Therefore we think that the physician should consider nutritional polyneuropathy and similar neurological conditions after bariatric surgery and warn the patient against this risk in the postoperative period.

**Keywords:** Bariatric surgery, gastric mini bypass, weight loss, polyneuropathy, sleeve gastrectomy,

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PP-0897 [Obesity]

## Effects of Sleeve Gastrectomy Technique on Intra-gastric Pressure

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**Introduction:** Sleeve gastrectomy surgery is the most commonly used surgical technique in the world among bariatric surgical applications. It is reported that it provides effective weight loss and has a lower complication rate than other surgical procedures. Unfortunately, in many studies, it has been reported that it causes an increase of complaints in the patients with reflux and causes these complaints to occur in the patients without reflux symptoms. It is held responsible for the regurgitation of the content in the esophagus by increasing gastric pressure. The purpose of this study is to demonstrate the effect of the sleeve gastrectomy technique by measuring the pre-and post-gastrointestinal pressure with a manometer.

**Case:** Preoperative and postoperative 3rd month intragastric pressure values and demographic data of the patients who underwent sleeve gastrectomy surgery in Bakırköy Dr. Sadi Konuk Training and Research Hospital Department of General Surgery endoscopy unit between 2016 and 2017 were reported. There was a total of 62 patients who underwent sleeve gastrectomy and had preoperative and postoperative 3rd month data. Fifty (81%) of the cases were female and 12 (19%) were male. The mean age was 27 (19-42). The body mass index averaged 47.1 (37.2-68.4) in the preoperative period. The mean postoperative BMI in the 3rd month was 37.3 (1.6-56.4). Preoperatively, the mean intraabdominal pressure value was 10 mmHg (1-18). The mean postoperative 3rd month was 10.5mmHg (3-19). Statistically, p value<0.497 was not significant.

**Conclusion:** The sleeve gastrectomy technique causes an increase in gastric pressure. However, it is not fair to suggest this as the only reason for the development of postoperative reflux. It is also a statistically insignificant factor. The multivariate measures to be made after longer follow-ups in a many cases will be more guiding.

**Keywords:** Intra-gastric pressure, sleeve, obesity

## PP-0898 [Obesity]

## Is Microscopic Examination Necessary in Patients Undergoing Laparoscopic Vertical Sleeve Gastrectomy? Histopathological Evaluation Results of 815 Patients

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**Objective:** Worldwide, obesity is an important, preventable health problem that has tripled since 1975. Bariatric surgery has been shown to be an effective method of weight loss with short and long-term results in this patient group. Since cost effectiveness has become a major concern nowadays, most surgical clinics tend to give up the upper gastrointestinal tract (GIS) endoscopy and abdominal ultrasound as the standard procedure before the clinical procedure. There are also studies reporting that due to the same reasons histopathological evaluation is unnecessary if the macroscopic evaluation of sleeve gastrectomy specimen removed is normal. Although the number of laparoscopic sleeve gastrectomy (LSG) is increasing every year in our country, the spectrum of gastric histopathological findings in this subset of patients has not been extensively investigated. In this study, we aimed to investigate the histopathological findings of 815 morbid obese patients who underwent LSG in our center.

**Material and Methods:** In this study, histopathologic evaluations of gastric resection materials of 815 patients who underwent LSG due to morbid obesity between January 2013 and December 2017 in our institution were investigated.

**Results:** Of the 815 patients included in the study, 680 (83.4%) were female, 135 (16.6) were male and their mean age was 38.29 years (18-66 years). When the patients who underwent LSG were divided into two as below and above 40 years of age. It was found that the number of patients was close to each other (n: 446 and n: 369). The most frequent pathologic change was chronic inactive gastritis (34.9%), characterized by the appearance of chronic inflammatory cells in lamina propria, while normal findings were detected in almost half of the 815 LSG specimens taken into consideration (48.7%). Other histopathologic changes were mild superficial chronic active gastritis (6.6%), chronic active gastritis (6.5%), lymphoid aggregate (3%), and gastrointestinal stromal tumor (GIST) (0.1%). The specimens of 418 patients who had abnormal findings on histopathological evaluation were stained with Giemsa and Alsiyan blue to investigate microorganism and intestinal metaplasia. According to this, 11.9% of the patients had helicobacter pylori positive and 3.3% of patients had intestinal metaplasia. When the patients were grouped as below and above 40 years of age, it was found that helicobacter pylori positivity was similar (10.4%, 14%, p>0.05), but intestinal metaplasia was higher (0.8%, 6.7%, p<0.05) in patients aged  $\geq$ 40 years.

**Conclusion:** In our study, benign histopathologic changes were detected in the majority of gastric specimens removed during LSG. We conclude that histopathological evaluation in a selective patient group (advanced age, family history of cancer and pathology on macroscopic evaluation) instead of routine histopathological evaluation is a more cost effective and reliable method in the light of these results.

**Keywords:** Laparoscopic sleeve gastrectomy, stomach, histopathological evaluation, macroscopic evaluation

## PP-0899 [Obesity]

## Portomezenteric Venous Thrombosis After Sleeve Gastrectomy: Two Case Reports

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**Introduction:** Portomesenteric venous thrombosis (PMVT) is a rare clinical condition with high morbidity and mortality after laparoscopic bariatric surgery. In this article, we aimed to present 2 patients who developed PMVT after Laparoscopic Sleeve Gastrectomy (LSG).

**Case 1:** A 36-year-old female patient was discharged without complications 21 days ago after Laparoscopic Sleeve Gastrectomy in the external center. The patient admitted to the emergency department with complaints of abdominal pain in the epigastric region and inability to defecate. Oral +iv opaque abdomen CT showed portal vein, superior mesenteric vein and main branches, loss of contrast enhancement in splenic vein and was evaluated in favor of acute-subacute thrombosis. At the same time there was a diffuse concentric homogeneous wall thickening in the jejunum that persisted over a long segment. When the patient was in operated urgently, 50 cm of the intestinal loop became necrotic at the 50th cm from the treitz. The patient who underwent

resection anastomosis, was treated with fractionated heparin in postoperative period and anticoagulated with warfarin after effective heparinization. Factor 5 Leiden mutation was detected in the hematological evaluation and the life-long anticoagulation decision was made.

**Case 2:** A 37-year-old male patient was discharged from our hospital 19 days ago after the LSG operation without any problems. The patient admitted to the emergency service with complaints of poor general condition and inability to defecate. Oral +iv opaque abdomen CT showed findings of intestinal necrosis from the middle jejunal level to proximal ileal level in the long small intestinal segment, mesenteric vascular and SMV lumen, free air lucencies from the portal vein branches and diffuse free fluid in the abdomen. Acidosis developed at the time of admission to the emergency department and the general condition was poor. When the patient was taken to the operation under emergency conditions, it was seen that 160 cm of intestinal loop became necrotic at the 500th cm from treitz. The patient who underwent resection anastomosis was followed up with fractionated heparin during preoperative and postoperative period. The patient was exitus in intensive care conditions on the postoperative 1st day.

**Conclusion:** The etiology of PMVT complication after laparoscopic surgery is multifactorial. Factors that may contribute to the pathogenesis of this condition include undiagnosed thrombophilia, local damage close to portal flow, surgical damage, oral contraceptive use, increased intraabdominal pressure due to pneumoperitoneum, and a long-term reverse Trendelenburg position. The patient should be anticoagulated as soon as PMVT is detected; early explorative laparotomy should be performed if there are intestinal necrosis findings.

**Keywords:** Complication, obesity, portomesenteric venous thrombosis

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## PP-0900 [Obesity]

# Improved Pseudotumor Cerebri Case Following Morbid Bariatric Surgery

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**Introduction:** Obesity, one of the most common diseases of our age, causes the treatment of existing diseases to be difficult and prevents these diseases from being under control. Pseudotumor cerebri is one of these diseases. Pseudotumor is the definition of intracranial pressure increase in the absence of a structural lesion such as intracranial space-occupying lesion, meningeal inflammation or venous occlusion. It has been observed that pseudotumor cerebri is seen more frequently among obese people, in female gender, who recently had excessive weight gain. In this case presentation, we described the changes in a morbid obese patient with pseudotumor cerebri diagnosis regarding the symptoms of pseudotumor cerebri following the morbid obesity treatment with her weight loss.

**Case:** Our patient was a 28-year-old woman with a 4-year history of pseudotumor cerebri follow-up. During her first eye examination, folds in the nerve arteries and minimal concentric narrowing of peripheral visual field were observed. Ventricular shunting and optic nerve reservoir operations were proposed due to the lack of improvement despite her medical treatment and the patient was observed to gain weight during her follow-ups. When the patient was admitted to our hospital, bariatric surgery was planned for the patient whose body mass index (BMI) was 37.2 kg/m<sup>2</sup> (height: 163 cm, weight: 99 kg). Having consulted neurology department, her medical treatment was stopped 3 days prior to the operation. Laparoscopic sleeve gastrectomy was performed. In the postoperative period, the patient did not receive pseudotumor cerebri treatment. In the meantime, the patient did not have any complaints. The patient who was discharged on her 3<sup>rd</sup> postoperative day was not given the medications prescribed for her pseudotumor cerebri. Patient's BMI decreased to 31.6 kg/m<sup>2</sup> within the 1<sup>st</sup> postoperative month and her occasional vomiting complaints improved through symptomatic treatment during this period. No pathology was observed in the neurology examination of the patient in her postoperative 4<sup>th</sup> month. The CSF pressure was measured as 15 mmH<sub>2</sub>O. The neurological examination and fundus oculi examination were normal. The patient's cranial MR, MR venography, visual field examination were evaluated as normal. It was observed that the symptoms of enlargement of optic nerve sheath and elevated CSF distance that were observed in the preoperative MR were completely retracted. The ventricular shunting and optic nerve reservoir surgeries were no longer required. During her postoperative 5th month follow-up, BMI was decreased to 23.7 kg/m<sup>2</sup>.

**Conclusion:** Increased intracranial pressure syndrome (ICP) is common among obese women of fertile age. The decrease in BMI is one of the milestones of the treatment because weight loss in overweight ICP patients is closely associated with the reduction of symptoms. Bariatric surgery provides improved symptoms and continuous weight control in these patients. With bariatric surgery definitive treatment of obesity which is an important factor in etiology is provided. Shunting, which is the most common surgical procedure in the treatment of pseudotumor cerebri, causes a high failure rate because it restricts the pressure gradient of the shunt due to high intraabdominal pressure in obese patients. In this case, a dramatic improvement was reported in the post-bariatric surgery symptoms and examination findings of a patient who was recommended shunt and optic nerve surgery since she had shown no improvement in her symptoms despite high-dose medical treatment of pseudotumor cerebri.

**Keywords:** Pseudotumor cerebri, morbid obesity, laparoscopic sleeve gastrectomy



## PP-0901 [Obesity]

## Leakage Associated with Post-Sleeve gastrectomy Intraabdominal Hemorrhage

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**Objective:** To investigate hemorrhage complications of laparoscopic sleeve gastrectomy (LSG) patients.

**Material and Methods:** 1892 primary LSG cases were retrospectively evaluated in our department. The data of 27 (1.4%) patients who developed hemorrhage were reviewed.

**Results:** Patients' median hospital stay was 7 days (range 4-102 days). Patients were divided into two groups according to the median day of hospitalization (group 1: 7 days or less n=16, group 2: longer than 7 days n=11). The demographic characteristics of the groups, the amount of hemorrhage and hematomas, abscesses or leakage complications were compared using the Mann-Whitney U test and chi-square test at a 95% confidence interval. There was no difference among the groups in terms of age, sex, amount of hemoglobin decrease, amount of drainage, history of anticoagulant usage, hypertension, and OSAS. The mean values of BMI, platelet count and hospital stay in Group 1 and Group 2 were significantly different (respectively 41.8±3.6 vs. 46.7±6.9, p=0.020, 257.1±80.0 vs. 320.9±63.0, p=0.008, 5.3±1.7 vs. 30.1±30.8, p<0.001). While hematoma was developed in only 2 patients (12.5%) in group 1, 7 patients developed hematoma (63.6%) in group 2 (p=0.011). In Group 1, no abscess developed in any of the patients, whereas in Group 2, 6 patients developed abscess (54.5%) (p=0.002). Similarly, group 1 did not develop any leakage, but in group 2, 4 patients developed leakage (36.4%) (p=0.019). Laparoscopic exploration was performed in 3 patients in Group 1 (18.8%). None of the patients in this group required radiological or endoscopic interventional procedures. In Group 2, 6 patients (54.5%) underwent radiological intervention (p=0.002), 3 patients (27.3%) had endoscopic stenting (p=0.056) and one patient (9.1%) underwent surgical treatment (p=0.624). In patients who did not develop hematoma no leakage was observed (0/18) but four (9.4%) out of 9 hematoma patients leakage developed (p=0.007).

**Conclusion:** Intraabdominal hemorrhage that is observed postoperative LSG usually limits itself and increases the leakage rate in the presence of hematoma, and thus this leads to an increase in the number of additional intervention and duration of hospitalization.

**Keywords:** Sleeve gastrectomy, intraabdominal hemorrhage, leakage

## PP-0902 [Obesity]

## The Effect of Laparoscopic Sleeve Gastrectomy on Liver Function Tests and Cholestasis Enzymes in Obese Patients

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**Objective:** Investigation of the effect of laparoscopic sleeve gastrectomy on liver function tests and cholestasis enzyme levels in morbidly obese patients.

**Material and Methods:** 170 patients who had been diagnosed with morbid obesity and who had undergone laparoscopic sleeve gastrectomy (LSG) were included in the study. 5cc blood samples were taken from the patients before the LSG operation and in the postoperative 3<sup>rd</sup> and 6<sup>th</sup> months. After resolving the serums AST, ALT, total bilirubin, direct bilirubin, GGT, LDH, ALP, Amylase and Lipase enzyme levels were analyzed. Body mass indexes (BMI) were calculated preoperatively and in the 3<sup>rd</sup> and 6<sup>th</sup> postoperative months. Statistical analyzes were performed using Friedman Test, Wilcoxon-Signed Rank Test, Paired Samples t Test, and Bonferroni-Dunn Test.

**Results:** The average age of 170 morbidly obese patients that were included in the study was 37.24±13.39. Their preoperative BMI (kg/m<sup>2</sup>) was calculated as 44,67±4,28, BMI in the 3<sup>rd</sup> postoperative was 35,86±8,38, the 6<sup>th</sup> postoperative BMI was calculated as 30,34±6,27 (P<0,001). Their preoperative AST (U/L) level was measured as 33,11±14,73, postoperative 3<sup>rd</sup> month level was 30,95±13,41, postoperative 6<sup>th</sup> month level was 26,93±14,33 (P<0,001). Preoperative ALT (U/L) level was 34.51±21.42, postoperative 3<sup>rd</sup> month level was 33.01±23.59, postoperative 6<sup>th</sup> month level was 27.79±22.35 (P<0.001). Preoperative direct bilirubin (mg/dL) level was 0,14±0,09, postoperative 3<sup>rd</sup> month level was 0,14±0,06 and postoperative 6<sup>th</sup> month level was 0,16±0,08 (P=0,005). Postoperative 6<sup>th</sup> month AST and ALT values were significantly lower than preoperative and postoperative 3<sup>rd</sup> month

values. Direct bilirubin value was found to increase in the postoperative 6<sup>th</sup> month according to preoperative values. No significant differences were determined in the preoperative and postoperative total bilirubin, amylase, lipase, GGT, LDH and ALP values

**Conclusion:** In obese patients, we often see chronic liver disease with a wide spectrum of liver damage as simple steatosis, steatohepatitis, and advanced fibrosis. Abnormal liver function tests are the most important indicators of fatty liver disease that develops in patients after excessive weight gain. Today, LSG is the most preferred bariatric surgery method in effective weight loss and management and it decreases many morbidity factors such as chronic liver disease, diabetes mellitus and hypertension after meaningful weight loss.

**Keywords:** Obesity, laparoscopic sleeve gastrectomy, liver function tests

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## PP-0903 [Obesity]

# A Rare Complication in Bariatric Surgery: Mesenteric Venous Thrombosis Case

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**Introduction:** Obesity is defined as having a body mass index greater than 30. It is one of the most important health problems in the world. It has been reported that diabetes, hypertension, coronary heart diseases and cancer rates increase in obese patients (1). Surgical treatment has an important place in the treatment of obesity, but it has important complications. In this case, it is aimed to give information about acute mesenteric venous thrombosis developed after laparoscopic sleeve gastrectomy (LSG).

**Case:** A 48-year-old male patient admitted to our department due to severe abdominal pain. LSG was performed 15 days before admission. The patient stated that the pain was constant and increasing. Physical examination showed distension, tenderness and defence. Blood tests reported as CRP: 113,9, WBC: 15650, lactate:11. Abdominal tomography revealed symmetric wall thickening and contamination of the surrounding fatty tissues, and free pelvic fluid in the long-segment jejunal on the left quadrant of the abdomen. The patient underwent laparotomy. The jejunal segment was resected after mesenteric venous thrombosis-associated gangrene and necrosis were detected at 150 cm from the Treitz ligament, holding an approximately 80 cm segment. The patient was started an antiagregant therapy in the early stage and was discharged from the hospital without an additional problem in his follow-up.

**Conclusion:** There are early and late complications in bariatric surgery. Anastomotic leakage, intra-abdominal infection resulting from this leakage, nausea-vomiting, dumping syndrome are the early period complications; whereas protein, iron, vitamin B12, phosphate, calcium, vitamin absorption disorders, incisional hernia, cholelithiasis and renal diseases are among late complications (2,3,4,5). Portomesenteric vein thrombosis (PMVT) is a rare but serious postoperative complication that can be seen after laparoscopic bariatric procedures and the incidence is between 0.3-1%. In 92% of the patients who developed PMVT after LSG, an underlying hematologic abnormality was detected. The most frequent abnormality was Factor VIII elevation (76%). Antithrombin III, factor V Leiden and protein C/S deficiencies are other important abnormalities (6). Mesenteric venous thrombosis is most commonly seen between the 13<sup>th</sup> and 30<sup>th</sup> postoperative days and its pathophysiology is multifactorial. Laparoscopic abdominal pressure (>14 mmHg) in bariatric surgery decreases venous return by 50% and thus increases thrombosis risk. Hypercapnia induced by CO<sub>2</sub> insufflation causes sympathetic vasoconstriction and increases peripheral resistance, mean arterial pressure, pulmonary artery pressure and pulmonary capillary wedge pressure. In addition, soft tissue trauma that is caused during surgery (mini-gastric bypass or manipulation of the small intestine in duodenal switch operations) may lead to mesenteric venous thrombosis in patients with no previous hypercoagulability condition by causing the release of tissue factors. Increased intraabdominal pressure due to pneumoperitoneum affects portal vein flow. Obesity itself is a risk factor for venous thrombosis with increased intraabdominal pressure leading to a pro-inflammatory condition. As a result, it should be kept in mind that mesenteric venous thrombosis may be seen as an early complication despite the use of antiagregant after bariatric surgery.

**Keywords:** Laparoscopic sleeve gastrectomy, mesenteric venous thrombosis, obesity

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## PP-0904 [Obesity]

# Retrospective Analysis of Cases with and without Suture of Stapler Line in Laparoscopic Sleeve Gastrectomy

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**Objective:** Laparoscopic sleeve gastrectomy remains the most common surgical procedure for the surgical treatment of morbid obesity. Several methods have been tried to reduce complication rates after laparoscopic sleeve gastrectomy. Suturing the stapler line is one of these methods. We aimed to present a retrospective review of the complication rates of the cases with and without sutured stapler line.

**Material and Methods:** 2854 patients who underwent laparoscopic sleeve gastrectomy between 2008 and 2016 due to morbid obesity without sutured stapler line and who were clipped at the intersecting staple lines and bleeding points and 812 patients who underwent laparoscopic sleeve gastrectomy between 2017-2018 and whose stapler line with omentum was continuous sutured using 3/0 monofilament absorbable suture material were analyzed in terms of age, sex, body mass index (BMI), comorbidities and perioperative, postoperative and late stage complications.

**Results:** Of the 2854 patients whose stapler line was not sutured, 2026 (70.9%) of them were female and 828 (29.1%) of them were male. The average age was 39.4 (16-72) and the average BMI was 43.6 (33.4-83.6) kg/m<sup>2</sup>. Of the 812 patients with sutured stapler line, 586 (72.1%) were female and 226 (27.9%) were male. The average age was 37.8 (16-69) and the average BMI was 42.8 (33.6-89.7) kg/m<sup>2</sup>. The leakage rate was 0.28% (8) in the non-sutured group and while it was 0.12% (1) in the sutured group. The rate of postoperative hemorrhage was 0.77% (22) in the non-sutured group while it was 0.12% (1) in the sutured group. 2 patients from the non-sutured group received bleeding control via relaparoscopic application. In other patients bleeding was controlled by blood transfusion and medical treatment. Complications such as wound site infections, trocar site herniation, gastric twist, and stenosis were not seen in the sutured group, but these complications were observed in about 0.2% of the non-sutured group.

**Conclusion:** In patients undergoing laparoscopic sleeve gastrectomy, suturing of the stapler line reduces the complication rates.

**Keywords:** Sleeve, leakage, stapler line

## PP-0905 [Obesity]

# The Management of Cases with Leakage in Laparoscopic Sleeve Gastrectomy

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**Objective:** Laparoscopic sleeve is one of the most commonly used surgical treatment methods of obesity. One of the complications that is difficult to manage is leakage. In this regard, we aimed to convey our experience on the treatment approach of 20 leakage patients.

**Material and Methods:** Of the 3666 patients whom we had performed laparoscopic sleeve gastrectomy on during 2010-2018, 8 cases had leakage and were performed intragastric stenting and drainage. In addition to these, 12 patients who were referred to our center due to leakage also received the same procedure. The cases were examined in terms of age, sex, body mass index (BMI), comorbidities, past surgical history, duration of leakage, and applied stent and their follow-up period.

**Results:** Of the patients, 14 were male and 6 were female. The average age was 39.4 (24-56) and the mean BMI was 42.7 (36.7-55.2). Type 2 diabetes was present in 60% (12) of the patients, hypertension in 55% (11), and hyperlipidemia in 65% (13). 4 patients had a history of appendectomy and 6 patients had a history of laparoscopic cholecystectomy. The average onset of symptoms was 4.8 (3-15) days. Symptoms in 2 patients started on day 15 and in other patients between days 3-6. The most common symptoms were discomfort (95%), fever (85%), abdominal pain (80%), tachycardia (80%) and respiratory distress (50%). The average CRP value of the patients was 126 (82-356) and the mean leucocyte count was determined as 12400 (8600-26000). All patients underwent an oral-IV contrast-enhanced abdominal tomography scan. In 16 patients, abscess pouch was observed in the subdiaphragmatic region located adjacent to the spleen and in 2 patients had congested intraabdominal free fluid. Of the patients, 5 had laparoscopic, 2 had laparotomy and 11 had percutaneous drainage. In endoscopic examination, leak site was clearly observed in 13 patients. 9 patients received endoscopic 24 cm bariatric stenting simultaneously, and 11 patients received simultaneous 17 cm full-coated nitinol stent. Following stenting, after an average of 2.8 days (2-6) days, oral liquid nutrition was initiated. After 6.4 (6-8) weeks, the stents were removed endoscopically.

**Conclusion:** Stent application and drainage as an early intervention in cases with leakage are effective treatment methods.

**Keywords:** Sleeve, leak, stent

## PP-0906 [Obesity]

# Comparison of Metabolic Activities of Gastric Plication and SADI-S Surgeries

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**Objective:** Our aim in this study is to compare the clinical and laboratory data of the postoperative first year with the preoperative period of diabetic patients who underwent gastric plication and SADI-S surgeries in our department and to compare these surgeries in terms of metabolism in the light of this information.

**Material and Methods:** The aim of this study was to compare the data of postoperative first year with data of the preoperative period of patients diagnosed with Type 2 Diabetes Mellitus (DM) on whom we performed gastric plication and SADI-S surgeries in the General Surgery Department of University of Health Sciences, Bağcılar Health Research and Application Center between 1 January 2013 and 30 June 2016. The data from the 1st year has been examined. Forty-three patients who underwent gastric plication and 36 patients who had SADI-S were included in the study. Information used in the study was obtained from patient files, computerized patient record system and telephone interviews with patients.

**Results:** When the postoperative first year and the preoperative period of the patients who underwent both surgeries were compared, there was a statistically significant decrease in body weight, body mass index, fasting blood glucose, insulin, HOMA-IR, HbA1c, cholesterol, hemoglobin and triglyceride levels. After surgery, it was determined that the medication required to be taken by the patients with Type 2 DM decreased. When the efficiency of the surgeries was compared, it was seen that compared to gastric plication SADI-S surgery provided more effective improvement in insulin, HOMA-IR, HbA1c and cholesterol levels. SADI-S was found to be more successful in reducing the need for medication. Hemoglobin values in the gastric plication group were found to have less decrease than the SADI-S group and gastric plication was found to be more effective in weight loss.

**Conclusion:** In our study, both surgeries showed significant improvement in weight loss, blood sugar and lipid profile. Gastric plication was more effective on weight loss and SADI-S was more effective on lipid and blood sugar parameters.

**Keywords:** Gastric plication, SADI-S, metabolic surgery, surgical treatment of diabetes, obesity

## PP-0907 [Obesity]

# The Analysis of 3666 Patients undergoing Laparoscopic Sleeve Gastrectomy

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**Objective:** Obesity is a worldwide phenomenon that continuously increases and needs to be treated since it causes other diseases. We aimed to investigate patients who underwent laparoscopic sleeve gastrectomy for obesity between 2008 and February 2018.

**Material and Methods:** Between 2008 and 2018, due to morbid obesity 3666 patients were subjected to laparoscopic sleeve gastrectomy under French pressure of 15 mmHg from 4 trocar sites using automatic liver ecarteur. Patients were evaluated in terms of age, sex, body mass index (BMI), comorbidities, perioperative, postoperative and late complications.

**Results:** Of the 3666 patients, 2612 (71.2%) were female and 1054 (27.8%) were male. The average age was 38.9 (16-72) and the average BMI was 43.2 (33.4-89.7) kg/m<sup>2</sup>. 2024 (55.2%) cases had Type 2 diabetes, 1460 (39.8%) patients had hypertension, 2814 (76.7%) had dyslipidemia, 624 (17%) patients had coronary artery disease, and 2696 cases had reflux disease. In two patients, perioperative liver injuries and hemorrhage occurred due to liver ecarteur. Postoperatively, it was observed that 9 (0.24%) patients had leakage, 23 (0.62%) patients had hemorrhage, 4 (0.1%) patients had trocar site herniation, 4 (0.1%) had wound site infections, 2(0,05%) had gastric twist, 2 patients had occlusion and 1 patient had intrathoracic herniation. As leak test, scopy was used on 650 patients and for the rest of the patients methylene blue was utilized, and oral fluid was initiated on the 1<sup>st</sup> postoperative day. Average hospital stay was 2.4 days.

**Conclusion:** Laparoscopic sleeve gastrectomy is a safe and effective treatment because of the low complication rate in the surgical treatment of obesity.

**Keywords:** Sleeve, gastrectomy, morbid obesity

## PP-0908 [Obesity]

## Retrospective Comparison of Weight Loss Rate and Nutritional Parameters of the 6<sup>th</sup> Month in Patients Undergoing Laparoscopic Sleeve Gastrectomy and Gastric Bypass

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**Objective:** Obesity is a condition that often arises due to excessive consumption of high-energy food and caused by losing the balance between energy intake and expenditure. It is known that obesity decreases the life span. Therefore, obesity is a medical problem that needs to be treated and bariatric surgery is becoming an increasingly important treatment. We aimed to contribute to the literature by comparing the weight loss in the 6<sup>th</sup> month and nutritional parameters of laparoscopic sleeve gastrectomy (LSG) and laparoscopic roux-en-y gastric bypass (LRYGB) operations which have an important place in bariatric surgery.

**Material and Methods:** A total of 110 patients, aged between 18 and 65 years, who underwent bariatric surgery, 65 had LSG and 45 had LRYGB, in the General Surgery Department of Bursa High Specialization Training and Research Hospital between the years of 2012-2017 were included in the study. Patients who had LRYGB and LSG were compared in terms of age, gender, comorbidities, height, preoperative and postoperative body mass index, weight, iron and iron binding capacity, ferritin, vitamin B12, folic acid, 25-hydroxy vitamin D level, hemoglobin and MCV levels. In our study, these two separate operations in bariatric surgery were intended to be compared statistically in terms of preop and postop 6<sup>th</sup> month BMI and nutritional values and to determine whether there was a significant difference between these two operations.

**Results:** There was no statistically significant difference in terms of height, preop and postop weight and BMI values and postoperative 6<sup>th</sup> month weight loss in kg. All parameters before surgery were similar between both groups, while the decrease in serum iron and MCV values at LRYGB group in the postoperative 6<sup>th</sup> month was statistically significant ( $p=0.014$ ,  $p=0.031$ , respectively). The difference between the other parameters was not statistically significant.

**Conclusion:** Based on these results, LSG and LRYGB operations can be considered as effective surgical methods with similar outcomes and success rates owing to their early term results. Patients' follow-up procedures are ongoing for long-term evaluations of the patients included in our study.

**Keywords:** Obesity, bariatric surgery, sleeve gastrectomy, roux-en-y gastric bypass, weight loss, nutrition

## PP-0909 [Obesity]

## Effective Risk Factors of Postoperative Development of GallStone in Laparoscopic Sleeve Gastrectomy Patients

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**Objective:** Bariatric procedures that are commonly used to treat a serious metabolic disease such as morbid obesity can lead to the development of another serious metabolic disease such as gallstone development in patients. New gallstone formation by 30% has been reported after sleeve gastrectomy. The exact cause of gallstone development after sleeve gastrectomy is still unclear today. The purpose of this study is to reveal the risk factors in the development of gallstones after sleeve gastrectomy.

**Material and Methods:** We retrospectively evaluated 36 patients who underwent laparoscopic sleeve gastrectomy due to obesity in our department in the last 3 years and was followed up for at least 1 year. Differences between patients with and without synchronous gallstones and patients with new gallstones were studied. Categorical variables were analyzed with square test, normally distributed continuous variables were analyzed with t test and non-normally distributed variables were analyzed with Mann Whitney u test. The normal distribution was assessed with Kolmogorov-Smirnoff test. Correlations between variables were analyzed with Pearson when the data were normally distributed and for non-normally distributed data spearman correlation analysis was used. The independent variables predicting the development of gallstones was evaluated with logistic regression analysis.

**Results:** Of the patients included in the study, 28 were female and 8 were male, the average age was 39 (21-58), and the mean BMI was 46 (37-70). It was determined that while 5 patients had active psychopathology and 7 had history of psychopathology. Gallstone rate at the time of admission was 9/27 and all the patients admitted with gallstone complaint were female. Newly developed gallstones in 9 patients (25%) after an average follow-up of 3 months after sleeve gastrectomy were determined. The average duration of gallstone development was 3 months, and gallstone development was not detected after one year. Although not statistically significant, of the patients who developed gallstone 7 patients were female and 2 were male. In terms of gallstone development, the high value of white blood cell at the time of admission was determined as a predicting variable for the development of gallstones (average WBC value was 10478 K/uL in patients with gallstone development, 8130 K/uL  $p=0.009$  in patients without gallstone development). HDL values were higher in patients with synchronous stone than in patients without stone development (average HDL level was 53 mg/dL with stone, without stone it was 43 mg/dL  $p=0.028$ ), and low preoperative HDL values in new gallstone development were found to have liminal significance in terms of new gallstone development. The weight at the time of admission and the early and late postoperative weight loss rates were found to be not associated with the development of gallstones. No relationship was detected between past and present psychopathology, DM and HT with the development of gallstones.

**Conclusion:** Moderate inflammation at the time of admission may be a predicting variable of postoperative gallstone development. Female gender may also be a risk factor for gallstone development.

**Keywords:** Sleeve gastrectomy, gallstones, risk factors

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## PP-0910 [Obesity]

# The Effect of Laparoscopic Sleeve Gastrectomy and Gastric Mini Bypass Surgeries on Cardiac Functions in Morbid Obese Patients

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**Objective:** Today laparoscopic Sleeve Gastrectomy and Gastric Mini Bypass surgeries are frequently preferred surgical methods both in our country and in the world. Our aim in this study is to assess the effect of these 2 commonly used methods on cardiac function.

**Material and Methods:** Patients who underwent Laparoscopic Sleeve Gastrectomy and Gastric Mini Bypass surgeries between May 2015 and November 2016 were included in the study. Demographic data and comorbid factors of the patients were recorded. Of these patients, the patients with postoperative echo results for the 6<sup>th</sup>, 12<sup>th</sup>, and 24<sup>th</sup> months and were followed-up regularly were repeated and examined in detail. Patients' body mass index, body surface areas, interventricular septum thickness in the echo results, left ventricular diameter, posterior wall thickness, left ventricular mass, left ventricular mass index, ejection fraction, diastolic left ventricular diameter and preoperative, postoperative 6<sup>th</sup> month, 12<sup>th</sup> month and 24<sup>th</sup> month systolic left ventricular diameter were calculated and recorded separately.

**Results:** A total of 311 patients were included in the study. Of these 311 patients, 285 had LSG and 26 had GMB surgery. All the patients completed a 12-month postoperative follow-up period and 55 LSG patients completed their 24-month follow-up. Average follow-up time was  $18.6\pm 5.21$  (min:12, max:29) months. The average preoperative BMI in LSG group was  $43.24\pm 6.18$  kg/mt<sup>2</sup> and in GMB group was  $40.56\pm 4.78$  kg/mt<sup>2</sup>. There was no statistically significant difference between the preoperative demographic data of the two groups. There was no statistically significant difference in terms of patients' postoperative 6<sup>th</sup> and 12<sup>th</sup> month weight loss percentages. There was no statistically significant difference in patients' preoperative and postoperative 12<sup>th</sup> month left ventricular mass, left ventricular mass index. Although postoperative 6<sup>th</sup> month left ventricular mass and left ventricular mass index were better in GMB group compared to LSG group, no statistically significant difference was determined.

**Conclusion:** LSG and GMB surgeries have similar effects in terms of left ventricular mass index, which is considered as the best indicator of early postoperative period (first 1 year) weight loss percentage, (EWL), and cardiac functions.

**Keywords:** Laparoscopic sleeve gastrectomy, gastric mini bypass, ventricular mass index

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## PP-0911 [Obesity]

# Is Stapler Line Reinforcement Important in Laparoscopic Sleeve Gastrectomy Patients?

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**Objective:** The most feared surgical complications in laparoscopic sleeve gastrectomy (LSG) surgery are leakage from the stapler line and postoperative bleeding. Many methods are used to prevent leakage and bleeding. These include the use of v-lock suture reinforcement, fibrin glue, continuous suturing with prolene and the use of metal clips. In this study, we aimed to compare the patients with clipping and non-clipping in terms of early complications.

**Material and Methods:** 36 patients aged 19-59 years who underwent LSG between February 2014 and January 2018, were included in the study. All of the patients had a body mass index above 40. The data regarding BMI, age and gender of the patients were recorded. The patients were divided into two groups. All the patients were treated with the same type of stapler (Echelon). 18 out of 36 patients were not administered any reinforcement to the stapler line at the end of LSG (Group I: 18 patients, Control group). In the second group, only stapler sites and bleeding sites were reinforced with metal clips. (Group II: 18 patients). Patients were followed up for complications such as anastomosis leakage, length of hospital stay, postoperative early bleeding, and wound site infection.

**Results:** Of the 36 patients, 22 were female and 14 were male; the average age of the patients was 34.3 (19-59) and the average BMI was 44.3 (39.1-59 kg/m<sup>2</sup>). There was no significant difference between the groups in terms of BMI. During postoperative follow-up, no gastric leakage from the stapler line was observed in both groups. There was no difference in early bleeding and serohemorrhagic drainage (respectively average: 85cc, 65cc). In terms of duration of hospital stay and wound infections in the postoperative period, there was no significant difference between the two groups.

**Conclusion:** Between clipping and non-clipping methods that are some of the stapler line recruitment methods that we apply in LSG surgeries, we observed that there was not a significantly difference in terms of complications such as postoperative early bleeding, anastomosis leakage and wound site infection. As a result, we reached the conclusion that the choice of stapler alone prevented the complications from happening.

**Keywords:** Stapler line reinforcement, laparoscopic sleeve gastrectomy, leakage

**PP-0912 [Obesity]****Relationship of Thiol/Disulfide Hemostasis, a New Oxidative Stress Marker, with the Body Mass Index****Gökhan Akkurt<sup>1</sup>, Hakan Buluş<sup>1</sup>, Utku Tantoğlu<sup>2</sup>, Mustafa Alimoğulları<sup>1</sup>**<sup>1</sup>*Keçiören Training and Research Hospital, Ankara, Turkey*<sup>2</sup>*Merkez Efendi State Hospital, Manisa, Turkey*

**Objective:** Oxidative stress is commonly seen in obesity due to the imbalance between reactive oxygen species (ROS) and antioxidant defense system of the cell. In this study, we aimed to investigate the relationship between thiol/disulfide hemostasis, which is used as an indicator of oxidative stress, and body mass index.

**Material and Methods:** A total of 293 patients who were admitted to the general surgery polyclinic of Keçiören Training and Research Hospital were included in the study. Demographic characteristics, comorbidities, history of tobacco use and body mass index (BMI) of the patients were evaluated. Patients with chronic diseases (hypertension, diabetes mellitus, rheumatologic diseases, liver failure, etc.) and active malignancy were not included in the study. 2 cc of blood was taken into the ependymoma tube after the consent of each patient was obtained. Native thiol, total thiol, disulfide, disulfide/native thiol, disulfide/total thiol values were obtained by using Thiol/Disulfide hemostasis kit in Atatürk Education and Research Hospital biochemistry laboratory. Patients were divided into 4 groups as patients with BMI<18,5, BMI 18,5-24,9, BMI 25-29,9 and BMI ≥30, and all patients were divided into 2 groups as smokers and non-smokers. Native thiol, total thiol, disulfide, disulfide/native thiol, disulfide/total thiol values of the patients were statistically evaluated with their BMI and smoking habits in each group.

**Results:** Of 293 patients, 56,7% (n=166) were female and 43,3% (n=127) were male. There was statistical significance between native and total thiol values of non-smokers and smokers (p=0,01). There was no significant relationship between disulfide, disulfide/native thiol, disulfide/total thiol values and smoking. The average native thiol value of patients with BMI<18.5 was significantly higher than those with BMI 25-29.9 and BMI≥30, and the average native thiol value of patients with BMI 18.5-24.9 was significantly higher than those with BMI≥30 (p<0.05). The average total thiol value of those with BMI<18.5 was significantly higher than those with BMI 25-29.9 and BMI≥30 (p<0,05). There was no significant relationship between disulfide value and BMI (p=0.8). The average disulfide/native thiol value of patients with BMI ≥30 was significantly higher than those of BMI 18.5-24.9 (p=0.003). The average disulfide/total thiol value of those with BMI ≥30 was significantly higher than those with BMI 18.5-24.9 (p=0.003). The average native/total thiol value of those with BMI 18,5-24,9 was significantly higher than those with BMI ≥30 (p=0.027).

**Conclusion:** In our study, we investigated the association of thiol/disulfide hemostasis, a new oxidative stress marker which is defined for the first time by Erel et al, with BMI and smoking. Compatible with the literature, native thiol and total thiol values

were statistically significant in patients with low BMI, and disulfide, disulfide/native thiol, disulfide/total thiol values were statistically significant as BMI increased. There was a significant difference between native thiol and total thiol values in smokers. We believe that future Thiol/Disulfide Haemostasis measurements can be used effectively for diagnosis since they will be more cost effective, easier to apply and more accessible thanks to the more extensive studies to be performed in the future.

**Keywords:** Oxidative stress, thiol disulfide, body mass index

## PP-0913 [Obesity]

# Effects of Laparoscopic Sleeve Gastrectomy (LSG) on type 2 DM

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**Objective:** Obesity is an important risk factor for the development of type 2 diabetes mellitus (DM). In our country, bariatric surgery is increasingly used in the treatment of morbid obesity. In this study, the effect of laparoscopic sleeve gastrectomy (LSG) on type 2 DM was investigated.

**Material and Methods:** Of 593 patients who underwent Laparoscopic Sleeve Gastrectomy (LSG) for morbid obesity between 2011-2017 in our department, we reviewed a total of 169 patients diagnosed with preoperative type 2 DM. Body weight (BW), fasting blood glucose levels (FBG), and Hemoglobin A1c (HbA1c) levels of patients diagnosed with Type 2 DM were measured and were analyzed preoperatively, postoperatively in the 3<sup>rd</sup> and 6<sup>th</sup> months, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> years. Preoperative diabetes treatment and post-LSG treatment changes were evaluated.

**Results:** 141 of the patients were female, 28 were male and average age was 46±9 years. Preoperative average value was 129±20 kg, body mass index (BMI) was 47±7 kg/m<sup>2</sup>, fasting blood glucose (FBG) was 131±46 mg/dl and HbA1c levels were 6.7±1.3%. Prior to surgery, only 122 patients were using oral antidiabetic (OAD), 19 were on OAD and insulin (INS), 9 were on exanotide and INS, 19 were using Exanotide and OAD. The postoperative 3<sup>rd</sup> month average BW, FBG and HbA1c values were respectively 104±18 kg, 105±23 mg/dl and 6±0,85, while the average BW, FBG and HbA1c values in the postoperative 5<sup>th</sup> year were respectively 102±25 kg and 107±20 mg/dl and 5.7±0.7%. The decrease in postoperative 3<sup>rd</sup>, 6<sup>th</sup>, 12<sup>th</sup> month and 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> year body weight, fasting blood glucose and HbA1c levels were statistically significant compared to the beginning (p<0.001). When the patients' postoperative 5<sup>th</sup> year medication treatment for DM was evaluated, 23 (71%) of the 32 patients that we could contact with were not on medication for DM; 7 used to take OAD, 1 used to be on Exanotide+INS, and 1 was on Exanotide+OAD. Drug therapy for DM was discontinued in 23 patients.

**Conclusion:** Sleeve gastrectomy in Type 2 DM patients caused a significant and persistent weight loss. Blood sugar control improved in the early stages and this improvement showed continuity. In our study, LSG has removed 70% of the requirement for diabetes medication, but long-term studies with larger numbers of patients are needed for long-term efficacy.

**Keywords:** Bariatric surgery, obesity, diabetes mellitus, sleeve gastrectomy

## PP-0914 [Obesity]

# Is there a Relationship between Age and Weight Loss in Patients with LSG?

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**Objective:** Laparoscopic sleeve gastrectomy has become the most applied method of bariatric surgery. In this study, we aim to present the results of the effect of the age of patients who have completed their postoperative 1<sup>st</sup> year of surgery performed by a single surgeon on weight loss.



**Material and Methods:** The files of the patients who underwent consecutive sleeve gastrectomy between January 2014 and January 2018 were retrospectively reviewed. Demographic characteristics of the patients, duration of operation, discharge time, complication development, follow-up weight, and comorbidities were recorded. Patients were divided into three groups as 19-33 years of age, 34-48 years year of age, and 49-60 years of age.

**Results:** Of 36 patients who completed their postoperative 1<sup>st</sup> year, since 3 patients were no longer followed up, 32 patients were included in the study. Twelve (33.3%) of the patients were male and 21 (66.6%) were female. The age range was between 19 and 60 years with an average age of 34.3 (19-59) years. There were 11 (33.3%) patients in the 19-33 age group, 12 (36.3%) in the 34-48 age group and 10 (30.3%) in the 49-60 age group. Average preoperative body mass index (BMI) was 44.3 (39.1-59 kg/m<sup>2</sup>). In the first year, the average BMI was 27,5 kg/m<sup>2</sup> ( $\pm 5,1$ ) and in the range of 19,1-46,1 kg/m<sup>2</sup>. The average excess body mass index loss (% EBML) for the first year was 85.9% ( $\pm 21.9\%$ ), in the range of 20.9%-184.6%. The EBML in the age groups was respectively 92.79%, 91.84% and 81.79%. While there was no statistically significant difference ( $p=0,389$ ) between the age groups 19-33 and 34-48 years of age, a significant difference was determined among all other age groups ( $p=0,001$ ).

**Conclusion:** Postoperative 1<sup>st</sup> year% EBML  $\geq 50\%$  is defined as successful. The average% EBML of all patient groups was 85.9% and they were successful in terms of weight loss. However, 49-60 age group was seen to be less successful than the other groups. In addition to this age-related metabolic performance, it was associated with a surplus of systemic diseases.

**Keywords:** Weight loss, laparoscopic sleeve gastrectomy, age

## PP-0915 [Obesity]

# Body Fat Mass Measurements for Weight Loss Following Bariatric Surgery

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**Objective:** One of the most important health problems today is obesity and obesity triggered morbid diseases. The most effective results in the fight against obesity are obtained by surgery. The most important determinant of obese patients' postoperative follow-up process is body mass index. This study compared body mass index (BMI) and Body Fat Mass (BFM) measurements to follow up weight loss in adults after bariatric surgery.

**Material and Methods:** BMI ve BFM measurements for postoperative first, third and sixth months of 44 patients who were operated at Düzce University Faculty of Medicine were taken and correlations were analyzed using Pearson correlation analysis.

**Results:** We found a significant ( $p<0.05$ ) decrease in the third postoperative month BMI and BFM values. (An average reduction of 17.94 in the BMI and an average reduction of 26.94 in the BFM). There was also a strong positive correlation between daily BMI and BFM in the 3<sup>rd</sup> post-operative month ( $r=0.56$ ).

**Conclusion:** Our study suggests that comparison of body fat mass measurement with BMI in order to follow weight loss after bariatric surgery is an effective procedure.

**Keywords:** Bariatric surgery, obesity, body mass index, body fat index

## PP-0916 [Obesity]

# Comparison of Early Clinical and Metabolic Outcomes of Laparoscopic Roux-en-Y Gastric Bypass and Mini Gastric Bypass Surgery in Morbidly Obese Patients

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**Objective:** In this study, we aimed to present the early effects of LRYGB (laparoscopic roux-en-y gastric bypass) and LMGB (laparoscopic mini-gastric bypass) operations on clinical and metabolic outcomes as a retrospective study.

**Material and Methods:** The study included a total of 50 morbidly obese patients 25 of which had undergone LRYGB (group I) and 25 had had LMGB (group II) surgeries. In both groups, average duration of surgery, postoperative complications in the 3<sup>rd</sup> and 6<sup>th</sup> month follow-ups, weight loss, diabetes parameters, lipid parameters, nutritional parameters and comorbidities were evaluated comparatively.

**Results:** A total of 50 patients, 25 patients in group I (with LRYGB technique) and 25 patients in group II (with LMGB technique), underwent morbid obesity surgery. The average age of the patients was 38 in both groups. While the average duration of surgery was 120 minutes in group I and it was 110 minutes in group II. Average BMI in group I was 53.272 kg/m<sup>2</sup> and in group II was 49.008 kg/m<sup>2</sup>. The average follow-up period was 6 months. In both groups, fasting blood glucose, HbA1c, fasting insulin and HOMA-IR were measured as diabetes parameters. Patients using antidiabetic drugs in both groups discontinued drug use after the 6th month. In Group II, it was seen that diabetes regulation was performed significantly more rapidly. BMI, EWL, fat percentage, FFM values were evaluated for weight loss. In Group II, EWL (excess weight loss) was found to be significantly faster. Significant improvement was observed in lipid profiles and arterial blood pressure in both groups, but there was no significant difference between the groups. Laparotomy did not occur in both groups. There was no significant difference in the length of hospital stay of the patients. There was no mortality in both groups.

**Conclusion:** Other than surgery, obesity does not have an effective and long-term treatment. Although there are many surgical techniques, LRYGB is still one of the most frequently used bariatric surgical methods in the world. Technically it is a difficult process and the learning curve is very steep. LMGB, on the other hand, is a younger method and technically easier. Similar effects of LMGB, especially on diabetes and EWL, suggest that it may be an alternative to LRYGB, especially in selected cases. Although LMGB is still rather a new procedure and that it lacks a long-term assessment, this study has shown that both techniques are effective treatments for morbid obesity.

**Keywords:** Bariatric surgery, metabolic consequences, mini gastric bypass, roux-en y gastric bypass

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## PP-0917 [Obesity]

# Application of Laparoscopic Sleeve Gastrectomy on a Super Obesity Patient with a Giant Incisional Hernia After Laparotomy and Gastric Band Removal: Case Report

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**Introduction:** We aimed to present laparoscopic sleeve gastrectomy to a morbidly obese patient with a giant incisional hernia who previously underwent laparoscopic gastric banding and then removal of gastric band with laparotomy.

**Case:** A 55 year-old female patient whose BMI was 57.9 years ago underwent laparoscopic gastric banding. The patient who developed postoperatively incisional hernia lost 27 kilos. One year later, the patient whose BMI had been 41 was performed gastric band removal via laparotomy due to gastric band migration. After the operation there was a giant incisional hernia in which umbilicus was taken from the patient. The patient's BMI was 61.7 when she was admitted to our department. For 2 years she had type 2 DM and HT for 3 years. The patient's preoperative endoscopic examination was normal. Preoperative examination showed no signs of abnormality. Laparoscopic 4 trocar and lap sleeve gastrectomy were applied on the left upper quadrant. There were no perioperative complications. No procedure was performed for the incisional hernia of the patient. Leakage test was applied with methylene blue. The length of hospital stay was 3 days. The patient was discharged without any problem. Past laparotomy does not prevent laparoscopic sleeve gastrectomy.

**Keywords:** Incisional hernia, sleeve gastrectomy, gastric band

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## PP-0918 [Obesity]

# Transit Bipartition Surgery

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**Introduction:** "Transit Bipartition (Gastric Bypass) surgery is one of the metabolic surgical methods. Metabolic surgery is a surgical procedure for people with type 2 diabetes, elevated cholesterol, hypertension, and increased waist circumference." (S. Santoro) Transit bipartition surgery is a treatment of diabetic obese patients that removes insulin requirement and symptoms of diabetes through regulating postoperative hemoglobin A1C by 90%. In this study, it was aimed to prove that Transit Bipartition surgery is an effective surgical method in the treatment of diabetes and obesity by presenting the results of two patients who underwent Sleeve Gastrectomy + Transit Bipartition surgery in Biruni University Hospital Obesity department. Two cases who underwent transit bipartition surgery in our hospital were presented with comparative data.

**Case 1:** A 12-year-old patient with DM diagnosis was initiated DM oral treatment which continued regularly for 5 years since diagnosis. Then, at the age of 17, the patient was diagnosed with depression and bipolar disorder. The patient was treated for 14 years and then was admitted to our hospital. Transit Bipartition and Sleeve Gastrectomy was performed on 21.11.2017.

**Case 2:** The patient was diagnosed with DM and Hypertension 15 years ago and received insulin treatment since diagnosis. 5.5 years ago, the patient was diagnosed with bilateral renal dysfunction during routine checkups. However, the patient did not apply the recommended treatment. The patient continued only with routine dose of insulin and HT treatment. 4.5 years ago the patient was diagnosed with acute renal failure, dyspnea, sleep apnea, and was admitted to the hospital with complaints of difficulty in breathing and pain in the back quadrant of the abdomen. The patient who had been applied dialysis for 4 years was performed Transit Bipartition and Sleeve Gastrectomy on November 6, 2017.

**Conclusion:** Both patients underwent Sleeve gastrectomy + Transit bipartition surgery. When pre-op and post-op results of the patients were compared, it was observed that the hemoglobin A1c value was regulated in the post-op period and insulin use was no longer required. However, in both patients, DM systematic findings were found to be within the normal reference intervals in the post-op period and patients diagnosed with diabetes and undergoing Sleeve Gastrectomy + Transit Bipartition surgery continued to lose weight in accordance with the values observed in non-diabetic patients undergoing only Sleeve Gastrectomy operations and it has been observed that Transit Bipartition surgery is a surgical procedure that provides diabetes treatment.

**Keywords:** Bariatric surgery, transit bipartition, obesity

## PP-0919 [Pancreas Surgery]

# Pancreatic Cystic Neoplasms: Analysis of 11 Cases

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**Objective:** Pancreatic cystic neoplasms (PCN) are responsible for about 10-15% of the cystic lesions of the pancreas and less than 1% of all pancreatic neoplasms. They are often asymptomatic and represent a group of lesions varying from benign processes to invasive malign tumors. Therefore, it causes both diagnostic and therapeutic dilemmas. In this study, the clinical data of patients with PCN pre-diagnosis who underwent surgery in our clinic were analyzed.

**Material and Methods:** Demographic characteristics, preoperative findings, applied surgical methods, pathology results, post-operative complications and long-term follow-up results of 12 patients diagnosed with PCN in Ankara Numune Hospital General Surgery Department between May-2014 and October-2017 were evaluated.

**Results:** 3 of the patients were male, 8 were female and the average age was 48 (ranged between 18 and 63). The lesions were located on the head of the pancreas in 3 patients and on the tip of the pancreas in 8 patients. The average cyst size was 4.3 cm (1-10 cm). Three patients underwent pancreaticoduodenectomy, four patients underwent distal pancreatectomy and splenectomy, and four patients underwent distal pancreatectomy with splenic salvage. One of the distal pancreatectomy with splenic salvage was performed laparoscopically. Serous cystadenoma in two patients, serous cystic neoplasia in one patient, mucinous cystic neoplasia in one patient, mucinous cystadenocarcinoma in one patient, solid pseudopapillary neoplasm in five patients and simple cyst in one patient were reported. Postoperative complication rate was 45.5%. In postoperative period, acute renal failure developed in 1 patient and abscess in spleen developed after splenectomy in 1 patient. One patient had herpes lesions on the chest wall skin in the postoperative period. Another patient was unable to tolerate oral food intake in the early period but benefited from conservative treatment. A patient was found to have lost his life in the postoperative sixth month. The average follow-up period of the patients was 21.6 months (2-43 months).

**Conclusion:** Patients with pre-diagnosis of PCN should be managed based on current literature.

**Keywords:** Pancreas, cystic neoplasia, resection

## PP-0920 [Pancreas Surgery]

# Pancreatic Endometrial Cyst: Case Report

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**Introduction:** Pancreatic cysts may have different histopathological features. Although cystic masses located in the pancreas are very easy to detect radiologically, definitive histopathologic diagnosis is usually performed after surgical intervention. Pancreatic endometriosis is an extremely rare entity and has been reported in a total of 13 patients in the literature to date. This study is the first presentation performed in this regard from Turkey. This study aimed to discuss clinicopathologic data of pancreatic endometriosis in the light of relevant literature.

**Case:** A 28-year-old female patient. In the examination of the patient who had been admitted to the emergency department with acute abdomen symptoms, acute pancreatitis and a cystic mass about 6 cm in diameter were found in the pancreatic body-tip junction. In the patient who had been admitted to the hospital for examination and treatment; in the endoluminal ultrasonography (EUS) elevated amylase and carcinoembryogenic antigen levels were detected in the cyst content. The patient was diagnosed with pancreatic cystic malignant tumor and underwent distal pancreatectomy plus splenectomy. The patient was discharged with recovery after the postoperative period. Histopathological examination of the surgical material was reported as "cystic endometriosis of the pancreas".

**Conclusion:** Pancreatic endometriosis is extremely rare and frequently confused with other cystic lesions of the pancreas. Pre-operative diagnosis is extremely difficult.

**Keywords:** Endometriosis, pancreas, cystic lesion

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## PP-0921 [Pancreas Surgery]

# Pancreatic Neuroendocrine Tumors: Analysis of 9 Patients

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**Objective:** Neuroendocrine tumors are a heterogeneous group of neoplasms exhibiting variable clinical and histological features and emerging from neuroendocrine cells that are scattered throughout the body. Pancreatic neuroendocrine tumors (PNET) are rare and they constitute only 12.1% of all gastroenteropancreatic neuroendocrine tumors. In this study, 9 PNET cases operated between June 2015 and April 2017 in Ankara Numune Training and Research Hospital, General Surgery Department are presented.

**Material and Methods:** Nine patients who had undergone pancreatectomy or enucleation due to PNET for 22 months were included in the study. Neuroendocrine tumors are classified as pathological according to the World Health Organization (WHO) 2010 endocrine tumor classification. Patients were evaluated according to their age, sex, comorbidities, type of surgery, tumor size, duration of operation, length of hospital stay and follow-up. Pancreatectomy or enucleation was performed in 9 patients with PNET at Ankara Numune Training and Research Hospital, Department of General Surgery within the subject duration of time. The diagnosis of PNET was made by histopathological examination and immunohistochemical staining of surgical specimens with chromogranin A and synaptophysin. The tumor was classified as "dysfunctional," regardless of plasma hormone levels or tissue immunological activity, unless the patient typically had clinical symptoms resulting from the exhibition of functionality according to excessive hormone secretion and preoperative symptoms, clinical signs, and hormone levels. The data were collected retrospectively. Immunohistochemical staining was performed in 8 patients for Ki67. Tumor size was defined by the largest diameter of the tumor.

**Results:** Of the 9 patients, 5 (55.6%) were male, 4 (44.4%) were female and the average age was 48.4 (18-69) years. Functional tumors were detected in 3 patients and the preoperative diagnosis was confirmed as insulinoma. The average tumor size was 4.1 cm (between 1.2-7.5 cm). The tumor was located in the head of the pancreas in 3 (33.3%) patients, 2 (22.2%) in the body of the pancreas, and 4 (44.5%) in the tail. The surgical margin was positive in one patient. The average duration of surgery was 175.83 (75-300) minutes. Average hospital stay was 10.33 (4-23) days. The average disease-free survival was determined as 19.3 months (0-31 months). Although PNET is a rare and slow growing tumor, it can be malignant and its survival rate might be low. Major studies evaluating the surgical and conservative treatment of PNET are required.

**Keywords:** Neuroendocrine tumor, pancreas, insulinoma

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## PP-0922 [Pancreas Surgery]

# Histopathological Evaluation of Pancreatic Specimens: Analysis of 41 cases

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**Objective:** Pancreaticoduodenectomy (Whipple) and distal pancreatectomy (DP) operations are the preferred methods for indications ranging from benign inflammatory cases to malignant neoplasia. Pathological examination of both whipple and distal pancreatectomy specimens requires special attention in order to correctly evaluate many prognostically important factors. In this study, we aimed to present the pathological results of a total of 41 whipple and distal pancreatectomy cases that we evaluated retrospectively in a 6 year time period.

**Material and Methods:** A total of 41 whipple procedures and distal pancreatectomy specimens that were evaluated as benign and malignant in Istanbul Ekin Private Pathology Laboratory between January 2010 and January 2016 were included in the study.

**Results:** Of 41 cases; 10 (24.4%) were of distal pancreatectomy and 31 (75.6%) were of pancreaticoduodenectomy (Whipple) operations. 22 (53.6%) of the cases were male and 19 (46.4%) were female and the average age was 59.8. Six of the cases (14.6%) were benign and 35 (85.4%) were malignant. Of the 35 malignant cases; 15 were female, 20 were male and the average age was 60.44. In terms of localization, 6 of the tumors (17.1%) were ampulla, 7 (20%) were distal, 2 (5.7%) were duodenum and 20 (57.2%) were head of the pancreas localized.

**Conclusion:** In both whipple and pancreatic carcinoma cases on whom distal pancreatectomy procedure is applied, comprehensive knowledge of pathologic macroscopy is required, and all the specimens should be carefully sampled. Thus, the parameters that fundamentally affect the survey such as tumor type and lymph node status will be evaluated more accurately. Furthermore, we can reduce the rate of resection in benign lesions to some extent by performing FNAB via ERCP or EUS on the masses detected by preoperative imaging.

**Keywords:** Whipple procedure, distal pancreatectomy, pancreatic surgery

## PP-0923 [Pancreas Surgery]

# The Effect of Log Odds of Positive Lymph Nodes (LODDS) on Prognosis After Curative Resection in Patients with Ampullary Adenocarcinoma

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**Objective:** The prevalence of ampulla vater adenocarcinomas has increased in the last years with the extensive technological developments on diagnosis and treatment. It is known that compared to other periampullary cancers, its 5-year overall survival rate after radical resection is 30-70% with a relatively better prognosis. It has been emphasized that presence of lymph node metastasis is an important factor affecting the prognosis. For this reason, the proportion of metastatic lymph node number and metastatic/total dissected lymph node number has been examined in various studies. In recent years, Log Odds of Positive Lymph Nodes (LODDS) has been used in order to evaluate the prognostic significance of lymph node metastasis, but there are very few studies examining the prognostic significance of LODDS in ampullary adenocarcinomas. Our aim is to investigate the prognostic significance of LODDS in ampullary adenocarcinomas.

**Material and Methods:** The study was formed by the retrospective examination of hospital database. Patients who were operated in our department between 2010 and 2014 with complete follow-up were included in our study. Patients who had died in the early post-operative period (0-90 days) and with positive surgical margin were not included in the study. The LODDS calculation was performed as  $\log(\text{number of metastatic lymph nodes} + 0.5) / (\text{total number of lymph nodes} + \text{number of metastatic lymph nodes} + 0.5)$ . LODDS was divided into 3 subgroups and these were LODDS1 (LODDS<-1), LODDS2 (-1≤LODDS≤-0.5), and LODDS3 (LODDS>-0.5).

**Results:** 33 male and 14 female patients were included in the study. The average age of the patients was 57.8 (±1.6) and the average survival was 37.8 (±4.3) months. 1, 3 and 5 year survival rates were respectively 73%, 47% and 39%. The average number of extracted lymph nodes was 15.4 (±1.2) and the average tumor size was 2.33 (±0.9) cm. The average LODDS value was calculated as -0.9178 (±0.06). When the patients were divided according to their LODDS values; 22 patients were in the LODDS1 group, 17 patients were in the LODDS2 group, and 7 patients were in the LODDS3 group. Average survival time of LODDS1, 2 and 3 subgroups were calculated respectively as 52.3, 24 and 25.9 months and it was found that the survival effect of LODDS1 was statistically significant compared to LODDS2 and LODDS3 (p<0,05). It was determined that LODDS values displayed strong correlation with perineural invasion (p<0.05). Microvascular invasion was found to be significantly less in the LODDS1 group (p<0.05), but there was no significant difference between the LODDS2 and LODDS3 groups as in survival time.

**Conclusion:** We think that LODDS, which is calculated as a result of the detection of metastatic lymph nodes and resected lymph nodes in ampulla tumors, may be an important prognostic factor in predicting survival.

**Keywords:** Ampullary adenocarcinoma, LODDS, Log Odds of Positive Lymph Nodes

## PP-0924 [Pancreas Surgery]

# Isolated Pancreatic Transection due to Blunt Trauma; Case Report and Review of Literature

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**Introduction:** Blunt traumas of the pancreas are serious lesions. An isolated injury to the pancreas is rare. Physical findings and laboratory parameters are often misleading and missing clinical findings may cause serious problems.

**Case:** A 39-year-old female patient was reported with blunt pancreatic trauma following a kick of a cow and the computerized tomographic scan showed severance along the tail of the pancreas. Favorable results were obtained after the distal pancreatectomy of the patient. Studies have shown that amylase elevation in both serum and peritoneal lavage fluid is neither sensitive nor specific for the diagnosis of pancreatic damage. In a study of blunt pancreatic injury literature, Bradley showed that serum amylase levels were elevated in 82% of more than 400 reported cases with documented pancreatic injury. Since more than 75% of patients with blunt abdominal trauma and proven pancreatic injury have elevated amylase in blood, a sign of possible pancreatic injury should be considered in the case of blunt abdominal trauma and further examination should be performed.

**Conclusion:** This case reminds that pancreatic injuries should be considered in differential diagnosis of blunt abdominal trauma cases. Contrast-enhanced computerized tomography confirms the diagnosis, but if the diagnosis is still unclear, immediate endoscopic retrograde cholangiopancreatography is recommended. In addition, the clinician should be aware of the fact that when pancreatic injuries are managed conservatively, clinical, radiological, and laboratory parameters must be monitored until they are resolved.

**Keywords:** Pancreatic trauma, isolated transection, blunt trauma

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## PP-0925 [Pancreas Surgery]

# Pancreatic Tuberculosis Patient Surgically Treated with Pancreatic Serous Cystic Mass Presence

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**Introduction:** Tuberculosis is still a common disease in the world and one of the extrapulmonary spreading areas in the gastrointestinal system. Isolated pancreatic tuberculosis is rare. Solitary mass due to pancreatic tuberculosis may be diagnosed as pancreatic cystic neoplasm. With imaging techniques, we presented a pancreatic tuberculosis case that might be defined as pancreatic serous cystadenoma or serous cystadenocarcinoma.

**Case:** A 37-year-old female patient was admitted to the epicenter with the complaint of pain in the epigastric region that had been lasting for 2 weeks. Due to the mass detected via abdominal ultrasonography at the head of the pancreas, the patient was referred to us. Physical examination revealed no signs other than tenderness in the epigastric region. There was no hepatitis, jaundice, tuberculosis, malignancy in her history. The patient did not have any complaints of fever, jaundice, and coughing. In the laboratory evaluation of the patient, the results were as wbc: 5.4 (3.8-8.6), hgb 11.2 (11.1-17.1), plt: 122 (140-360), ast: 71 (5-40) (0-1.5), alt:68 (5-40), alp:1466 (30-120), ggt:689 (0-55), amylase: 78 (28-100), d.bil: 0.5 (0-0.35), total bil: 0.8 (0-1.1), cea: 0.01 (1-5), ca 19-9: 13.01 (0-33). Serological tests performed for Hiv, hepatitis B, and hepatitis C were negative.

The abdominal ultrasonography showed 37x31x55 mm in size millimetric cysts showing no doppler flow in the uncinate process of the pancreatic head and hypoechoic mass lesion with a soft tissue component (Serous cystadenoma-cystadenocarcinoma?). Hepatic artery and portal vein were reported to be present in the mass lesion with no significant stenosis or invasion. In the Triphasic abdominal CT, A hypodense lesion with a macrocystic component of 44x50 mm in size was seen in the axial that displaced portal vein to the anterior with the pancreatic head extending to the portal hilum in the superior section (Serous cyst adenoma-Cystadenocarcinoma?). Thorax CT was evaluated as normal. The endoscopic ultrasound showed an approximately 4 cm sized lobule multicystic lesion. The classic whipple surgery was performed with prediagnosis of serous cystadenoma and cystadenocarcinoma. In the pathologic evaluation of the specimen, chronic granulomatous inflammation was widely observed. There was no evidence of malignancy and the patient was diagnosed with pancreatic tuberculosis. The patient received anti-tuberculosis treatment in the postoperative period and no pathology was detected in the follow-up period.

**Conclusion:** In tuberculosis disease, extrapulmonary spread is the most common abdominal tuberculosis. Pancreatic tuberculosis is very rare and most common involvement is seen in the pancreatic head and the uncinate process of pancreas. The most common symptoms are abdominal pain, nausea, vomiting and weight loss. They may display a wide variety of images radiologi-

cally and may mimic pancreatic cystic neoplasms. They are microcystic, usually smaller than 2 cm but may reach larger sizes. In CT, cystic lesions form multilocular, thin septa, central scar and star-shaped calcification. In our patient, the whipple procedure was performed because of the radiologic diagnosis of serous cystadenomas or serous cystadenocarcinomas. After the evaluation of the tissue, anti-tuberculosis treatment was applied to the patient who was diagnosed with pancreatic tuberculosis and the patient's complaints were found to be regressed. Pancreatic tuberculosis may be confused with pancreatic cystic masses and should be kept in mind when there is a pancreatic serous cystic mass since it can not be diagnosed without laparotomy.

**Keywords:** Malignancy, pancreas, tuberculosis

## PP-0927 [Pancreas Surgery]

# Clinicopathological Approach in Pancreatic Neuroendocrine Neoplasms: A Single Center Experience

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Pancreatic neuroendocrine neoplasms (NEN) have begun to be detected in clinics increasingly. Despite the fact that the majority of NENs are non-functional, resection is still the most important approach in their treatment. Here, we aimed to address our patients diagnosed with NEN between 2013-2017 and our clinicopathological approaches performed in our department. In our hospital, 58 patients were diagnosed with NEN between the years of 2013-2017. 35 of the patients are male and 23 are females. The average age was determined as 59 years. 1 patient was incidentally diagnosed with abdominal ultrasonography, 27 patients with (EUS + Bx), 16 patients with CT, 8 patients with MRI and 6 patients with PET CT. 54 patients were evaluated as non-functional and 4 were functional NEN. The most common functional NENs are insulinoma and gastrinomas. Of the functional NENs in our series, 3 were assessed as insulinoma and 1 as somatostatinoma. 23 patients underwent follow-up and 34 had surgery. One patient did not agree with the operation and quit the follow up procedure. 2 cases had enucleation, 1 case had local resection, 5 cases had distal pancreatectomy, and 26 cases had pancreaticoduodenectomy (Whipple procedure). As a result, we have begun to encounter an increasing number of NEN cases today with the contribution of new diagnostic methods. Although surgical methods are often preferred in treatment, alternative methods such as ethanol injection etc. have recently been reported to be used.

**Keywords:** Insulinoma, neuroendocrine neoplasia, somatostatinoma

## PP-0928 [Pancreas Surgery]

# Prognostic Factors of Our Patients Who Underwent Whipple Procedure due to Pancreatic Tumor?

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**Objective:** Pancreatic Cancer is a cancer type with still a very high mortality in the whole World. Many patients are still not suitable for surgery today. Factors affecting the survival of patients who underwent whipple procedure due to pancreatic tumors in our hospital.

**Material and Methods:** 40 patients were included in our study who underwent Whipple procedure between January 2013 and January 2013 in our hospital. The demographic data of the patients was evaluated and also tumor localizations, tumor markers, hematocrit, albumin values were examined. Postoperatively, the patients' length of hospital stay, survival time, and pathology results were examined.

**Results:** Age, albumin levels, tumor markers, lymph node positivity and TNM stage of the patients who underwent operation were significantly effective on survival. Bilirubin level and gender were unable to be found effective on survival.

**Discussion:** Today, the whipple procedure performed due to pancreatic tumor is considered as the gold standard for treatment, but its effect on survival has not still reached satisfying levels.

**Keywords:** Whipple, pancreas, tumor

## PP-0929 [Pancreas Surgery]

# A Rare Pancreatic Tumor: Anaplastic Carcinoma

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**Introduction:** Anaplastic carcinoma of the pancreas is rarely encountered and is usually a case report in the literature. Anaplastic carcinoma has poorer prognosis than ductal adenocarcinomas of the pancreas. This tumor is usually cystic, closely related to the surrounding tissues and diagnosed at an advanced stage. The efficacy of chemotherapy and radiotherapy in treatment is controversial. We aimed to present the management of a pancreatic anaplastic carcinoma case on whom we had performed "Whipple" procedure due to a mass in the pancreatic head.

**Case:** In the examination of a 78-year-old case with complaints of jaundice, icterus was detected on his whole body. The examination of his abdomen showed that his gall bladder was palpable. According to his laboratory tests, total bilirubin: 22.11 mg/dl, direct bilirubin: 11 mg/dl, Gamma Glutamyl Transferase 458 U/L, Alkaline Phosphatase: 582 U/L, CA 19.9:433 U/mL, carcinoembryonic antigen: 2.7 ng/mL, Aspartate Transaminase: 180 U/L, Alanin Aminotransferase: 152 U/L. Other laboratory findings were normal. In radiological imaging; the choledoch was approximately 2 cm wide and all intrahepatic and extrahepatic bile ducts were larger than normal. It was also narrowed in the shape of a penpoint in the distal section. There was also a mass of approximately 15 mm in the pancreatic head. Metastasis was not detected in the distant organ scan. With these results, the case was planned for ERCP. However, in both ERCP attempts, choledoch could not be cannulated. Since the patient also could not be performed percutaneous transhepatic cholangiography and due to his excessive bilirubin elevation and his deteriorating general condition, "Whipple" procedure was performed. In the patient's histopathology, anaplastic carcinoma of the pancreas (undifferentiated) was detected and carcinoma metastasis was detected in two of the 8 dissected lymph nodes. Tumor size was 2.4x2, 1x1.5 cm. While lymphovascular invasion was not detected, perineural and neural invasion was observed. It was detected that CK (+), CK19 (+), CK20 (-), e-cadherin (-), sinoptinin (-), chromogranin (-), p53% 90 (+), and Ki 67% 20 (+). The case was started oral treatment on the 3rd postoperative day. On the postoperative 12th day, nausea and vomiting started. The gas gaita discharge decreased. Abdominal distension developed. The case was began to be followed via nasogastric probe. On the postoperative 22nd day, relaparotomy was performed on the patient who had been followed for about 10 days and whose ileus condition had not shown any improvement. The follow-up did not reveal any pathology in the previous surgical site and anastomoses. A small intestine segment was obstructed at approximately 7-8 cm proximal of the ileocecal valve, it was severely narrowed, and adhered to retroperitoneum. Bowel loops were deteriorated in some places but necrosis was not observed. In all the proximal region of this site, small intestines were severely dilated. "Loop ileostomy" was administered. After the second surgical procedure, the patient was discharged on the 11th day without any problems.

The patient was in stage IIB (T3N1M0). Chemotherapy was planned by the oncology council for the patient. During his 6th month controls, two metastatic lesions were detected in the liver. All his postoperative laboratory values are normal and the patient is still having an ongoing chemotherapy.

**Conclusion:** Radical surgical resection with safe surgical margin is the most effective treatment for pancreatic anastomotic carcinoma. It should be kept in mind that unexpected problems may occur in the postoperative period of pancreatic surgery.

**Keywords:** Anaplastic carcinoma, surgical treatment, prognosis, pancreas

## PP-0930 [Pancreas Surgery]

# Detection of Primer Localization in Periapillary Regional Tumors by KRAS Mutations

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**Objective:** The clinopathologic parameters that can be used to determine the behavior of the tumor and the primary localization in the periapillary region tumors (PRT) are limited. In this study, it was aimed to investigate the genetic and epigenetic changes that might clarify the molecular characteristics of PRT and the localization of the primary tumor.

**Material and Methods:** In this study, genes and miRNAs targeting RAS and EGFR signaling pathways were analyzed in a total of 126 patients, including 48 pancreatic heads, 41 ampulla of vater, 25 distal choledoch, 12 duodenum.



**Results:** Of the patients evaluated in the study, 54 were male and 72 were female. The average age was determined as 63.34 years. It was also determined that the KRAS codon 13 mutation was effective in the formation of pancreatic head tumors (82%;  $p < 0.001$ ). The low expression of miR-143 was statistically significant in ampulla of Vater tumors.

**Conclusion:** In the case of PRT carrying the KRAS codon 13 mutation in consideration of the present results, the primary tumor localization is determined as the pancreatic head and treatment options can be formed in this direction.

**Keywords:** KRAS, periampullary regional tumors, localization

## PP-0931 [Pancreas Surgery] Robotic Cystogastrostomy Case

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**Introduction:** Pancreatitis is a frequent and difficult to treat disease that can cause local and systemic complications. The most common causes of acute pancreatitis are bile stones and alcohol consumption and are responsible for approximately 80% of the cases. Although pancreatitis can be treated without any complication, it can also cause serious complications. Pseudocysts develop in 10% of acute pancreatitis cases, and in 20-38% of chronic pancreatitis cases. Pseudocysts may regress spontaneously but may sometimes require surgical intervention.

**Case 1:** A 26-year-old female patient presented with abdominal pain, nausea and vomiting. In her examination, she had tenderness on epigastric region. Multiple stones were found in her gallbladder. Her amylase was 16000 and lipase was 18400. Her calculated admission ranson was 0. The patient was admitted to our department. Her oral food intake was discontinued and parenteral fluid therapy and antibiotherapy were initiated. Patient's 48th hour ranson score was 0. On 3rd day follow-up, amylase and lipase values declined but her complaints did not show regression. Tomography was performed and in the pancreas an appearance compatible with necrosis was observed. Parenteral nutrition was started and her antibiotic was changed. Patient was discharged on the 18th day of follow-up since her complaints regressed. The patient complained of nausea and vomiting. Approximately 4 weeks later, the patient presented herself with the complaint of nausea and vomiting and a mass filling the whole abdomen, especially in the epigastric region, was palpated during her examination. In the pancreas, a lesion approximately 24cm in size compatible with pseudocyst was revealed in the tomography. The patient was prepared preoperatively and underwent robotic cystogastrostomy and cholecystectomy. Oral nutrition was initiated on the postoperative 7th day and on the postoperative 13th day the patient was discharged. The food was started and the patient was discharged on the 13th day postoperatively. The patient had no complaints in the outpatient clinic follow-up.

**Case 2:** A 48-year-old male patient presented himself with the complaints of epigastric pain and nausea. Epigastric tenderness was observed during his examination. Multiple millimetric stones were detected in his gallbladder. His Amylase was 6000 and Lipase was 2170. Admission Ranson was 1. He was admitted to our department. He was started on parenteral fluid therapy and antibiotherapy. His 48th hour Ranson score was 0. There was a pancreatic necrosis on the tomography of the patient whose complaints had receded but the fever was still high. An antibiotic change was made. The patient whose fever had been reduced was discharged but his amylase and lipase values were still above 200. A 20 cm pseudocyst was found in the pancreas in a control tomography of the patient who was admitted to our department 2 more times with the complaints of nausea and incapability of oral food intake. The patient was prepared preoperatively and he was performed cystogastrostomy and cholecystectomy. On the postoperative 7th day oral nutrition was started and the patient was discharged on the postoperative 11th day. The patient had no complaints during his outpatient clinic follow-ups.

**Case 3:** A 44-year-old male patient was admitted to the gastroenterology department of our hospital due to abdominal pain and incapability of oral food intake complaints and diagnosed with nonbiliary pancreatitis. His amylase was 3500 and lipase was 5600. His admission Ranson score was 1. 48th hour score was 1. The patient was started on parenteral nutrition and antibiotherapy. Since the patient's complaints did not show any remission he was performed a tomography. A 10 cm pancreatic pseudocyst applying pressure on the stomach was detected. The patient was referred to our department and was performed robotic cystogastrostomy. On the postoperative 7th day oral food intake was started. The patient was discharged on the 13th day postoperatively. The patient had no complaints during his outpatient clinic follow-ups.

**Conclusion:** Pseudocyst can be seen after pancreatitis. Robotic cystogastrostomy can be used safely in the treatment of pseudocysts.

**Keywords:** Pancreatitis, cystogastrostomy, robotic surgery

## PP-0932 [Transplantation]

# Results of Arteriovenous Fistulas in Elderly Patients

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**Objective:** In recent years there has been a significant increase in the number of elderly patients with hemodialysis requirement due to renal insufficiency. Elderly patients often have concomitant diseases, such as diabetes and arterial disease, which accompany kidney failure. In this study, we will share our experience and results with arteriovenous fistula (AVF) that we have created for the elderly patients with end stage renal failure in order to apply hemodialysis treatment.

**Material and Methods:** In our department, between September 2012 and September 2016 AVF was created in order to provide hemodialysis for 79 patients aged 65 years and over. Interventions on whom we used synthetic grafts that we had developed and AVFs created by the transplantation team in the department of General Surgery were not included in our study. 44.3% of the patients were female, 55.7% were male and their average age was 72.3 (65-94). The etiology of chronic renal disease is unknown in 50.6% of patients. The most frequent cause of the cases with known etiology is diabetic nephropathy (53.8%). Hypertension (89.8%) was the most common concomitant disease in our patients. Hypertension is followed by type 2 diabetes mellitus (49,3%) and coronary artery disease (37,9%). Primary patency was determined by determining the fistula clearance with doppler USG 14 days after the fistula was created; and 1 year later secondary patency was evaluated by determining the fistula clearance using the same technique.

**Results:** In our study, the most frequently applied AVF type was radiocephalic fistula with the percentage of 67%, followed by brachiocephalic (24%) and brachiobasilic fistulas (8.8%). The primary patency rate of brachiocephalic AVF (BS-AVF) is higher than that of radiocephalic AVF (RSF-AVF) (62.7% versus 77.8%, p: 0.245). Interestingly, the rates of secondary patency rates are similar in both groups (RS-AVF: 94,1 BS-AVF: 93,3). In brachytherapy fistulas, the primary and secondary patency rates are 100%. There is no difference in the success rates of radiocephalic and brachiocephalic fistulas in terms of gender and age. There is no statistical correlation between primary and secondary patencies with concomitant diseases. There was no statistically significant difference between the groups of patients with radiocephalic, brachiocephalic and brachiobasilic AVF groups in terms of complications (p: 0.424).

**Conclusion:** We believe that although brachiocephalic fistula results are recorded comparatively as more successful in elderly patients, according to the results of our study, our primary AVF choice should be radiocephalic AVF in elderly patients because of the possibility of creating brachiocephalic fistula in case of failure or similar complication rates.

**Keywords:** Radiocephalic, brachiocephalic, arteriovenous fistula, hemodialysis

## PP-0933 [Transplantation]

# Assessment of Liver Volume and Anatomical Structures of Donor Candidates Using 3D Printer Model Obtained by Computerized Tomography Data Before Living-Donor Liver Transplantation

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**Objective:** To obtain the liver prototype of the donor candidate using a 3D printer for the preoperative evaluation of vascular structures (hepatic artery, portal vein, hepatic vein) by using angiography computerized tomography data of the donor candidate in live donor liver transplantation.

**Material and Methods:** First, the 2D computerized tomography data of the liver of the live donor candidate was converted to a stereolithography file to be conformed with the 3D printer using a special computer software. The prototype was generated with a J 750 3D printer (Stratasys®) within 71 hours and 58 minutes using photopolymer resin raw materials with a layer thickness of 14 microns. In the post-printing review, we observed that the structures obtained in the model are compatible with the two-dimensional draft that we had had at the beginning of the process.

**Results:** Macroscopic liver structure and vascular structures (hepatic artery, portal vein, hepatic vein) were obtained as planned and according to the angiographic computerized tomography data in a three-dimensional liver model. This 3D prototype of the liver enabled us to directly visualize the anatomy of the vascular structures and provided additional advantages for surgical planning.

**Conclusion:** Before donor liver transplantation, the models obtained from 3D printers can be used to evaluate the anatomic structure of the donor liver candidate. Similarly, prior to complicated liver resections, this model may provide a different perspective to surgeons for safer surgeries in terms of more effective preoperative planning and evaluation.

**Keywords:** Three-dimensional printing, liver transplantation, liver surgery, prototype

## PP-0934 [Transplantation]

# A Rare Complication in a Liver Transplant Patient: Biliary Stenting Related Perfusion of Meckel's Diverticulum

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**Introduction:** Liver transplantation is the only definitive treatment option for end-stage liver disease that develops due to infectious, toxic, metabolic, biliary and vascular reasons as well as acute liver failure and some liver neoplasms. Meckel's diverticulum is the most common congenital anomaly of the small intestine. It originates from the failure of the omphalomesenteric duct to obliterate completely. The incidence is between 0.5% and 2% and it is usually asymptomatic. It becomes symptomatic when the complications such as obstruction, hemorrhage, diverticulitis, perforation, umbilical fistula are seen. The most common complications after liver transplantations are biliary complications. Balloon dilation and stent placement that are performed via percutaneous and endoscopic methods may resolve the problem by 60-70% in the cases of biliary obstruction. Gastrointestinal problems in transplant patients may be fatal. Previous abdominal surgery, long length of surgical time, relaparotomy, portal vein thrombosis, high-dose steroids use and the presence of CMV infection increases the risk. Perforation due to biliary stenting after liver transplantation is much less common.

**Case:** 3 years ago, a 20 years old male patient was performed right lobe liver transplantation from a live donor on the development of acute hepatic failure during Acute Lymphoblastic Leukemia (ALL) continuation treatment. He was admitted to our department with abdominal pain, nausea and vomiting. In his physical examination, there was sensitivity in the lower and upper right quadrant of the abdomen and his rebound present fever was 38. The patient's other system examinations were normal. Lab results were as follows: Wbc 10.210, Hgb/Htc 12.8/39, Plt 144.000, Alt/Ast 71/76, Alp/Ggt 108/228, Tbil/Dbil 2,9/0,9, Bun/Cr 10/0,53, and Albumin was 3.1. In the patient's abdominal CT, tx secondary changes in the liver, revealed intrahepatic bile ducts and air densities, suspected thickening on the wall of the cecum and smear-like fluid in the vicinity of cecum, and a foreign body? in the small intestines were observed. Upon these findings, the patient was operated on emergency conditions. The exploration revealed purulent fluid in the pericecal region, meckel diverticulum in the 40 cm proximal of the ileocaecal valve and biliary drainage catheter perforating the diverticulum. The abdomen was bathed and the Meckel diverticulum was excised. Appropriate antibiotherapy was given during his postoperative follow-ups. Medical regimen was initiated and since he had had no additional problems in his follow-ups and he was discharged with an adjusted medical therapy plan.

**Discussion:** In adults, the most common complication in Meckel's diverticulum is obstruction. Its incidence is between 26.2% and 53.4%. The most common complication after liver transplantation is biliary occlusion, usually occurring 9-11 months after the transplant. In patients with biliary occlusion, diagnosis is made by cholestasis tests, CTMRCP and cholangiography. Balloon dilation and stenting with PTK or ERCP are often successful in these patients. The most feared biliary stent related complication is stent migration. When we look at the literature, we see migrations and perforations due to biliary stents. Gastrointestinal perforation after liver transplantation among children is 2.7%. In recent studies, the incidence of bowel perforations among adults is between 1% and 5.3%. In the literature, there is no perforation of the meckel diverticulum case although there are cases with small intestinal perforation and rectum perforation due to biliary stenting. For this reason, our case is the first in this regard.

**Keywords:** Liver transplantation, Meckel's diverticulum, biliary stent migration

## PP-0935 [Transplantation]

# Cases with Double Ureters in Kidney Transplantation

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**Objective:** Ureter duplication (UD) is a rare anomaly. As it may be asymptomatic throughout life, recurrent urinary tract infections may cause urinary tract stones. There is no consensus on ureteroneocystostomy (UNS) to be performed in patients with UD when transplanting kidneys. In this study, we aimed to share our experiences about the UNSs performed on patients with UD in our department.

**Material and Methods:** Between January 2014 and December 2017, 2309 kidney transplants (KT) were performed in Antalya Medicalpark Organ Transplantation Department. Patient records were reviewed retrospectively. Age, sex, duration of dialysis, duration of follow-up after KT, renal donor type (live-cadaver), demographic characteristics, chronic renal failure (CRF) etiology, donor gender and donor age were examined. Urinary complications after KT, creatinine levels in follow-up, graft survival and patient survival were evaluated.

**Results:** A total of 28 cases with UD were detected in our center, 22 were live and 6 were cadaver donors. Four of the live donors received open donor nephrectomy and 18 received laparoscopic donor nephrectomy. 15 of the kidney recipients were male and 13 were female, their average age was  $38.07 \pm 14.7$  (8-60), tissue compatibility was  $2.6 \pm 1.2$  (0-4), the average follow-up duration was  $37.1 \pm 15.4$  months (9-59) months (the first case was in January 2013, the last case was in April 2014), average duration of surgery was  $80.6 \pm 13.4$  minutes (65-109), 13 patients were having preemptive, 14 patients were having hemodialysis and 1 patient was having peritoneal dialysis. Four patients had KT for the second time. Seven of the donors were male 21 were female. Average donor age was  $48.6 \pm 15.5$  (14-81) (14 year old donor was a cadaver donor). Graft loss occurred in 2 patients 3 weeks after KT (BN due to Focal segmental glomerulosclerosis-FSGS) and 2 months after KT (renal tx from cadaver donor). Four patients died of opportunistic infections and cardiac causes in the KT postoperative 3rd, 7th, 12th, and 14th months. The final creatinine control values of the 22 follow-up patients were  $1.4 \pm 0.8$  mg/dL (0.5-4.2). In one patient, urinary incontinence was seen in the second month, the patient was operated, no urinary incontinence was observed during follow-ups. Furthermore, presence of anastomotic stricture or vesicoureteral reflux were not observed among in follow-up patients. Demographic characteristics of renal transplant recipients and donors are shown in Table 1.

**Conclusion:** The best treatment for chronic renal failure is KT, but patients' cadaver waiting list is long [11]. As a result, in cadaver or live kidneys that are extremely important for patients with CRF, UD for KT should not be considered as an obstacle. However, our experiences and the experiences of other authorities suggest that in single ostium LG UNS method in graft kidneys with UD, use of 2 DJS are more secure compared to other methods. Studies should continue although there are sufficient studies in this regard.

**Keywords:** Kidney transplant, ureter duplication, ureteroneocystostomy

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PP-0936 [Transplantation]

## Kidney Transplantation Experiences in Patients with Vascular Problems

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**Objective:** Chronic renal failure (CRF) is a systemic disease that affects the vascular system negatively. Diabetes mellitus (DM) patients constitute 40% of CRF patients. Hypertension (HT) and smoking increase atherosclerosis in DM.

**Material and Methods:** Between January 1, 2014 and January 31, 2018, 1782 kidney transplants were performed in the Antalya Medicalpark Organ Transplantation Department. Of these cases, 193 were DM, 232 were HT and 110 were DM + HT. We retrospectively evaluated patients' average age, duration of hemodialysis, concomitant disease, smoking habits, duration of operation, donor type, follow-up period, operation time, discharge and postoperative KT average creatinine levels, grafts and patient survivals. In 3 patients, aortobifemoral bypass (ABB) was performed prior to KT by cardiovascular surgery (CVS) department (1

of these cases had coronary bypass followed by ABB in the same session). Renal artery anastomosis was then performed on the vascular graft by the organ transplantation surgery (OTS) team. Of the patients, 9 were heparinized after the renal perfusion due to the absence of flow in the distal anastomosis, their renal anastomoses were disrupted, the graft kidney was removed and reperfused again on the back table. An iliaco-iliac vascular graft was anastomosed by OTS. Renal artery anastomosis was performed on the graft artery again. In 5 of the cases, vascular grafts were placed on the iliac arteries by OTS before the kidney anastomoses, and the lower extremity circulation was provided, then live donor was operated and transplantation was performed. Four patients were reoperated on the basis of the presence of circulation problems while standing (postop 120th, 150th, 150th, 180th minutes) determined during their service follow-ups after KT. A dissection was detected in the distal anastomosis of the renal artery. The vascular graft repair in the dissected segment was performed by the OTS team. The transplanted kidney was evaluated as macroscopically normal. One patient who underwent radiotherapy for seminoma treatment before KT and had fibrosis in the vena cava, in both iliac veins, aortic and iliac arteries was performed KT by OTS team after additional bilateral ileocaval and ABB vascular graft repair.

**Results:** 19 of the patients were male, 3 were female. 19 were live donors and 3 were cadaver donors. Average age was 51.9 years, average follow-up period was 33.7 months, average duration of dialysis was 37.7 months. 9 patients had hypertension (HT), 6 patients had DM + HT, 3 patients had HT, 18 patients were consuming 18.7 packets of cigarette/year, Average duration of operation was 237 minutes, average discharge time was 9.1 days, average creatine levels for the 1st, 2nd, 3rd, 4th years were 1.9-1.3-2.1-1.7-1.5 mg/dL. 4 cases died on the 3rd, 10th, 21st and 31st months due to myocard infections and opportunistic infections. One of cases from cadaver donor had graft loss. 17 patients' kidney functions are normally followed. The cases were discharged with antiagregin aspirin and clopidogrel (plavix).

**Keywords:** Arterial dissection, kidney transplant, vascular complication

## PP-0937 [Transplantation]

# Variations of Liver Vascular Structures and Biliary Tracts

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Information on the vascular structures of the liver and the anatomy of the biliary tracts are necessary before the liver resection, liver transplantation, etc. This is very important for the planning of the surgical procedure to be performed and for the success of the surgical procedure, and therefore for the survival of the patient. Today, liver transplantation is performed either from a cadaver donor by transplanting the whole liver or from a living donor by transplanting the right or left lobe of the liver. In liver transplants, arteria hepatica propria, vena portae hepatis, the anatomy of vv. hepaticae and biliary tracts and their variations must be well known. In our study, the data obtained via magnetic resonance cholangio pancreatography (MRCP) and abdominal computed tomography (CT) imaging methods of 200 patients who were admitted to Medical Faculty of Dicle University Hospital between 01.01.2012-01.06.2016 were evaluated. In order to screen the imaging methods of the cases, the PACS (Picture Archiving and Communications System) system of the university hospital was used. The cases investigated by these imaging methods for any reason, mainly liver live donors, were included in the study. Patients who had previous liver resection, congenital anomalies, hepatic tumor and hydatid cysts were excluded from the study. In the study, the arteria hepatica propria of the left and right lobe of the liver, the anatomy of vv. hepaticae and biliary tracts and their variations were evaluated. Of the cases included in the study, 106 (53%) were male and 94 (47%) were female. The average age of the cases was 49.9±16.1 years. In 54% of the cases, in the a. hepatica propria, Michels Type 1 variation, which expresses classical anatomy, was detected. Apart from normal anatomy, the most common variations were Michels Type 5 variations (13%) and Michels Type 2 variations (11%). The percentage for the Michels Type 11 variations that can not be included in any group according to the Michels classification was 5%. In 76% of the cases, Covey Type 1 variation which represents classical anatomical distribution of vena portae hepatis according to Covey classification was detected. Apart from classical anatomy, the most common variations were Covey Type 2 variation (9%) and Covey Type 3 variation (8.5%). In 64% of the cases who had been included in our study while v. hepatica sinistra and v. hepatica intermedia united and formed a single root through v. cava inferior, in 36% v. hepatica dextra, v. hepatica intermedia and v. hepatica sinistra were going separately through v. cava inferior. When we evaluated the biliary tracts, 51.5% of the cases were classified as type A with classical anatomical distribution according to Couinaud's classification. Apart from the normal anatomy of the biliary tracts, the most common variation was the C1-type variation with the incidence of 15%. This was followed by type B variation with 12%. Our study revealed the data on vascular structures in the liver and variations in biliary tracts in humans. We believe that being informed on these variations will help surgeons in planning surgical procedures.

**Keywords:** Arteria hepatica propria, vena portae hepatis, vena hepatica, biliary tracts, variation

## PP-0938 [Transplantation]

# Management of Symptomatic Aneurysms Associated with Arteriovenous Fistulas

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**Objective:** Aneurysm associated with arteriovenous fistula (AVF) is one of the late complications of AVF. Treatment indications and treatment methods depend on whether the aneurysm is symptomatic or not. Our aim in this study is to present the treatment of symptomatic aneurysms associated with AVF in our center.

**Material and Methods:** Fifty patients who underwent symptomatic AVF aneurysms between January 2011 and January 2017 were evaluated. Forty-four (88%) patients' fistulas were closed for symptomatic venous aneurysm. In six patients (12%) with brachiocephalic AV fistulas had true brachial artery aneurysm and brachial artery repair with segmental brachial artery resection were performed.

**Results:** The most common symptomatic aneurysm was seen on brachiocephalic AV fistula (32 patients, 64%). The symptoms of the patients were aneurysm thrombosis (n=15, 30%), steal syndrome (n=9, 18%), rupture/massive hemorrhage (n=7, 14%), infection (n=7, 14%), skin necrosis (n=5, 10%), venous hypertension (n=4, 8%) and high flow-related heart failure (n=1, 3.2%). Nine patients (18%) had two or more symptoms. The average duration of dialysis in patients with venous aneurysm was 6.9±4.2 years, while the duration of dialysis in patients with arterial aneurysmectomy and brachial artery repair was 11.7±3.6 years (p=0.012).

**Conclusion:** In symptomatic arteriovenous fistula aneurysms, maintaining the continuity of the arteriovenous fistula is important. Arterial aneurysm is a rare complication of vascular access in hemodialysis patients and is especially seen in brachiocephalic AVF. Although aneurysm causes symptoms like thrombosis, ischemia, nerve compression, aneurysm rupture is the most important complication. Therefore, preoperative evaluation and appropriate surgical interventions will prevent morbidities that may arise.

**Keywords:** Aneurysm, arterial, hemodialysis, vascular access, venous

## PP-0939 [Transplantation]

# Concealed Danger After Kidney Transplantation in Long Term Peritoneal Dialysis Patients: Encapsulated Sclerosing Peritonitis

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**Objective:** The encapsulated sclerosing peritonitis (ESP) is a disease that should be considered elaborately since its etiology is not completely explained and is seen among peritoneal dialysis patients with a frequent course of mortality. In this study, we aimed to present the cases that we had to perform surgical treatment since they developed encapsulated sclerosing peritonitis clinical symptoms due to the termination of peritoneal dialysis after renal transplantation in patients with peritoneal dialysis (PD).

**Material and Methods:** Surgical indications, surgical techniques, complications and survival of the patients who developed ESP symptoms after having been performed kidney transplantation at our center were evaluated.

**Results:** There are 4 patients who underwent surgery for ESP after kidney transplantation at our center. Two of them were male and two were female. Their average age was 41 years. One patient had cadaver kidney transplant and three patients had kidney transplant from living donors. The average PD duration was 10.5 years. In all patients, renal transplantation graft was functional and patients were discharged with normal creatinine values. After the patients' peritoneal dialysis catheter was removed; complaints of nausea, vomiting, bloating and weight loss developed within 3 years in 1 case and 2 years in 1 case. One patient underwent diagnostic laparoscopy, intraabdominal fluid sampling and peritoneal biopsy. Laparotomy, total enterolysis, partial small intestine resection and ileostomy were applied in two cases due to complete obstruction development with partial small intestine involvement. Laparotomy, enterolysis, partial small intestine resection and double barrel ileostomy were performed on one patient due to the development of hollow organ perforation. Two cases died due to postoperative sepsis. Two cases have been living with normal renal functions. One of the surviving cases has recurrent ESP without obstruction.

**Conclusion:** Encapsulated sclerosing peritonitis is a rare but serious complication of peritoneal dialysis. It has very serious mortality and morbidity. Termination of PD in patients with long-term peritoneal dialysis may be the most important triggering factor for the emergence of clinical complaints. Surgical treatment is the last option in cases who are resistant to supportive care (nutrition) and medical treatment (anti-inflammatory, anti-fibrotic). It is suggested that treatment-resistant patients should be operated before their general condition is deteriorated. Morbidity and mortality are also very high in the operated cases. However, surgery performed by experienced teams on ESP surgery reduces postoperative morbidity and mortality.

**Keywords:** Renal transplantation, surgical treatment, encapsulated sclerosing peritonitis, peritoneal dialysis

## PP-0940 [Transplantation]

# The First Arteriovenous Fistula (AVF) Surgery Experience of Ümraniye Training and Research Hospital

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**Objective:** Autogenous arteriovenous fistulas are the first choice for hemodialysis access in patients with chronic renal failure. The aim of this study is to evaluate the first arteriovenous fistula (AVF) operations that we performed in our hospital and their early period outcomes.

**Material and Methods:** Between January 2014 and January 2018, a total of 54 AVF operations were performed on 51 patients who were diagnosed with chronic renal failure at Ümraniye Training and Research Hospital, Department of General Surgery and who were then referred to the Nephrology outpatient clinic. Doppler ultrasound evaluations were made for all patients and they underwent surgery under local anesthesia in the general operating room after they were approved by anesthesia polyclinic. In order to open an arteriovenous fistula, the non-dominant arm and the most possible distal region of this arm were preferred considering the patient's age and vascular structure. The AVF was generated on the wrist level and the antecubital region of the same arm was preferred when a second fistula was required. The upper extremity that was planned to be applied AVF on had been taken under protection at least 2 weeks in advance. Anastomoses were performed in all cases using a double-needle 6/0 or 7/0 polypropylene (ProLene®, Ethicon) using standard end-to-side technique. Demographic characteristics of the patients, AVF localizations, early period results and complication rates were investigated by screening patient files.

**Results:** Twenty-eight patients (54.9%) were female and 23 patients (45%) were male. The average age was 61 years (range, 46-78). 33 (61.1%) radiosefalic fistula (wrist), 19 (35.1%) brachiocephalic (antecubital) and 2 (3.7%) brachiobasilic fistula (antecubital) were performed. When peroperative thrill could not be obtained in 2 patients (3.7%) with newly created distal localized AVF, thrill was obtained by opening new fistula in a more proximal portion during the same session. While 51 patients (94.4%) were discharged at the 2nd postoperative hour, 3 patients (5.5%) were hospitalized in order for monitoring due to bleeding in the form of leakage and discharged on the first postoperative day. The average follow-up was 24 months (range, 3-50). One patient (1.8%, radioseparic fistula) had brachiocephalic fistula (postoperative 3rd day) upon the detection of dysfunctional fistula due to thrombosis in the early period outpatient clinic follow-up. Within the first postoperative month, a total of 4 cases (7.4%) developed arm edema and ecchymosis/hematoma. These patients were all medical treatment responsive. One patient underwent repair surgery due to postoperative aneurysm that developed in the postoperative 44th month (1.8%). AVF was closed in the 36th month (1.8%) on the occurrence of steal syndrome development in one patient. In 3 patients, wound site infection (5.5%) was detected in the incision line and antibiotherapy was applied. In the follow-up period, the rate of fistula patency was calculated as 94.4% (n=51/54).

**Conclusion:** When the early period results of the first AVF operations performed in our hospital are compared with the results in the related literature, the AVF operations we performed are found successful in terms of postoperative complication rates and patency.

**Keywords:** Arteriovenous fistula (AVF), hemodialysis, chronic renal failure

## PP-0941 [Transplantation]

# Early Period Results of First Combined/Sequential Liver Kidney Transplant in Primary Hyperoxaluric Type-1 Patients

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**Objective:** Primer hyperoxaluria Type-1 (PH-1) is the most common type of primary hyperoxaluria and it occurs due to the autosomal recessive transition defect of the liver-specific alanine: glyoxylate aminotransferase enzyme. Oxalate accumulation in all tissues except for the liver occurs due to the enzyme defect. Although conservative treatment can be time saving, the final treatment is liver/kidney transplantation. With this indication, 10-15 combined/sequential liver-kidney transplants (CLKT/SLKT) are performed annually in the whole world. In this study, early period results of the first cases that we studied in our department were examined.

**Material and Methods:** In our clinic, the data of patients who underwent CLKT/SLKT with PD-1 indications were prospectively recorded. The short-term results of 5 patients who had transplants due to PH-1 in 2017 were reviewed. Patients were examined in detail in terms of definitive diagnosis and transplantation strategy from the moment of admission. According to the clinical and laboratory findings at the time of admission, a decision was made on CLKT or SLKT and the treatment strategy was determined. Demographic and clinical characteristics of the patients were recorded. Duration of dialysis, types of dialysis, disease-specific biochemical and genetic tests were recorded. According to these properties, transplantation type algorithm was established. Patients' post-transplantation results were prospectively recorded.

**Results:** Three of the five patients were male and two were female. Two patients were 6, two patients were 10, and the last patient was 21 years old. One patient underwent CLKT and two patients underwent SLKT. One of the two patients who had liver transplants died while was waiting for the kidney transplant. There have been no liver or kidney graft failures in four surviving patients (follow-up period 4-8 months).

**Conclusion:** PH-1, which accounts for approximately 1% of pediatric end-stage renal failure, is a genetic disorder with high morbidity and mortality due to oxalosis and its final treatment is liver/kidney transplantation. Although early diagnosis and short duration of dialysis of the patient increase the chance of combined transplantation, a strategy to be followed with a multidisciplinary approach keeps the success rate of SLKT high.

**Keywords:** Primary hyperoxaluria, organ transplantation, combined transplantation

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## PP-0942 [Transplantation]

# Kidney Transplantation Experience of Medicana International Hospital, Ankara

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In this study, the demographic data (age, sex, transplant donor-recipient degree), postoperative complications, graft and patient survival of 417 renal transplantation cases performed between September 2009 and February 2015 at Ankara Medicana International Hospital Organ Transplantation Center are retrospectively evaluated and we aim to present our five year cadaveric and living donor renal transplantation experience.

**Keywords:** Kidney transplantation, transplantation, renal failure

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## PP-0943 [Transplantation]

# Determination of Posttransplant Recurrence Mechanisms in HCC by Gene Expression Profiles

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**Objective:** Hepatocellular carcinoma (HCC) is an important health problem as it is one of the most frequently observed neoplasms in the world. Nowadays, liver transplantation is performed especially in the treatment of cirrhotic HCC patients with local



or distant metastases. However, recurrence after transplantation is an important risk factor in the treatment of these patients and it reduces the success in treatment. In this study, it is aimed to explain the differences between the primary tumors of HCC patients with recurrence and the primary tumors of HCC patients without recurrence after liver transplantation. We would like to identify the mechanisms that are effective in recurrence and to determine the markers that can be used in routine practice.

**Material and Methods:** Thirty-four patients with HBV-associated HCC who were treated at our department and who had at least one year of follow-up were evaluated. Eighteen different genes were analyzed by PCR Array method in 4 patients with recurrence and in 30 other patients.

**Results:** In our study, 16 normal liver tissues were evaluated as control group. Among the 18 genes, p53, MET, TNFbeta, MAPK and SMAD4 genes were statistically significant when compared to 34 tumor control tissues. High E2F and AKT gene expressions were determined in 4 recurrent cases ( $p < 0.005$ ).

**Conclusion:** In the literature, pre-transplantation clinical data such as tumor diameter, number of nodules, vascular invasion and pre-transplant serum alpha-fetoprotein levels are associated with tumor recurrence. However, when these parameters are observed in normal values, markers in order for the prediction of recurrence are needed. Our work will be expanded by increasing the number of cases and including their clinical data. However, our findings suggest that E2F and AKT gene regulations can be used as predictive markers in predicting recurrence after transplantation.

**Keywords:** Gene expression profiles, hepatocellular carcinoma, recurrence

## PP-0944 [Transplantation]

# Liver Transplantation After Downstaging with TARE in Patients with Beyond-Milan Hepatocellular Carcinoma

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Liver transplant is one of the curative treatment options in Hepatocellular carcinoma (HCC). Liver transplantation provides significant long-term survival advantage in these patients because it treats both HCC and underlying liver disease. Only a small percentage of HCC patients meet the criteria for Milan. For this reason, for selected patients, in order for the tumor to meet the criteria of Milan downstaging might be a solution. Options include transarterial chemoembolization (TACE) and transarterial radioembolization (TARE). In this case, TARE was applied to the patient who had HCC with chronic liver disease background due to Hepatitis B and did not meet the criteria of Milan. We aimed to present the analysis of the patient who had cadaveric liver transplantation upon meeting the criteria of Milan after TARE. Downstaging in Beyond-Milan patients provides success in about half of the patients. However, extensive studies are needed to optimize success by setting appropriate standard protocols for this topic.

**Keywords:** Hepatocellular carcinoma, transplantation, transarterial radioembolization, milan, downstaging

## PP-0945 [Transplantation]

# Liver Transplantation in the Treatment of Crigler-Najjar Syndrome

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**Objective:** Crigler-Najjar Syndrome (CNS) is a rare disorder of bilirubin metabolism caused by the absence or scarcity of uridine diphosphoglucuronosyl transferase (UGT) enzyme. This hereditary disease shows a high serum concentration of unconjugated bilirubin. In Crigler-Najjar syndrome, bilirubin's conjugation does not have a function in the liver despite normal parenchyma. The accumulation of unconjugated bilirubin in the basal ganglia and cerebellum leads to neuronal cell death. CNS patients are at risk of irreversible brain damage. Hyperbilirubinemia is reduced by phototherapy, but this treatment is less effective as the patient grows. Children usually do not show compliance to treatment. The purpose of orthotopic liver transplantation (OLT) is to reduce serum bilirubin concentration to safe limits.

**Material and Methods:** 2130 patients were examined retrospectively at İnönü University liver transplantation institute between the years of 2002 and 2018 and 4 patients were seen to have liver transplantation with living donor with crigler najjar diagnosis. These patients were evaluated in terms of height, weight, sex and duration of follow-up period.

**Conclusion:** Four patients underwent live-donor liver transplantation due to Crigler-Najjar syndrome type 1. Three pediatric patients were male, aged 24, 23 and 15 months, with weight and height measurements 85 cm/13 kg, 85 cm/10 kg and 61 cm/5 kg respectively. The pretransplantation non-conjugated bilirubin concentration was 22 to 30 mg/dL despite 12 to 14 hours of phototherapy per day. Neurological examination results were normal. After the plasmapheresis, the liver transplantation with live donors were performed. The patients were had liver transplantations respectively in 2015, 2016 and 2017 with live donors. Our 4th patient, a 20-year-old female, had been followed for years with a high unconjugated bilirubin level and referred to our department for liver transplantation. The female patient with height and weight measurements of 160cm/60 kilograms was performed liver transplantation with living donor in 2013. Three patients had left lateral liver segment transplantation and one patient had right lobe living-donor liver transplantation. In all patients, the nonconjugated bilirubin concentration was normal on day 1 after transplantation and no phototherapy was needed. 1 month after the transplantation, the 23-month-old infant died due to bacterial growth in blood culture and sepsis despite the antibiotherapy. Other 3 patients are living with normal neurological findings. In Type 1 Crigler-Najjar syndrome, irreversible brain damage may occur. Urgent treatment methods such as plasmapheresis, blood transfusion, phototherapy and liver transplantation may not be able to reverse brain damage. CNS-diagnosed infants should be carefully assessed for signs and symptoms of bilirubin encephalopathy. Liver transplantation heals if it is applied before the development of neurological dysfunction.

**Keywords:** Crigler najjar, liver transplant, unconjugated bilirubin

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## PP-0946 [Thromboembolism, Anticoagulants]

# Acute Arterial Occlusion due to Vascular Closure Device: A Report of Two Cases

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**Introduction:** Vascular closure devices (VCD) are frequently used after endovascular procedures and have emerged as an alternative to manual compression. In addition to providing rapid hemostasis at the puncture site, VCD allows early mobilization of the patient and reduces workload in the department. However, although rarely, complications related to the procedure have been reported. In this study, two acute arterial occlusion cases that occurred right after VCD use and required surgical intervention are reported.

**Case:** A fifty-five-year-old female patient underwent a selective vertebral angiography of the right femoral artery and was admitted to our department with severe pain, paleness and coldness. In detailed evaluation, it was learned that arterial puncture was closed with VCD due to antiplatelet therapy. The right leg was colder and paler compared to the left leg. Distal pulses could not be palpated. Doppler ultrasound showed monophasic flow in the popliteal artery and its distal portion. Aorto-ilio-femoral angiography revealed a filling defect in the right main femoral artery. Then the patient underwent thrombectomy and the vascular closure device seen in the femoral artery puncture site, the collagen plug, an anchor (out of absorbable material) and the suture were removed together. A 60-year-old male patient underwent angiography to evaluate the superior mesenteric artery occlusion following aorto-bifemoral bypass grafting and was admitted to our department with complaints of severe pain, pulseness and coldness on his left arm. Because of the anticoagulant treatment and bypass history, it was learned that the patient had been performed arterial puncture from the left axillary artery and hemostasis was achieved with VCD. On his physical examination the left arm was cold and pale. Radial and ulnar pulses were not palpable. Doppler ultrasonography showed that the left axillary artery was occluded and thrombectomy was performed urgently. During the procedure, VCD was removed with the thrombus material. Both patients were discharged without complication after 2 days of follow-up after the procedure.

**Conclusion:** VCD is designed to provide rapid hemostasis after arteriotomy. The device, which consists of an absorbable polymer anchor, a small collagen sponge and suture holding them, is absorbed within 60-90 days. Despite several advantages, due to possible complications, VCD use is not recommended in every patient: Especially patients with collagen allergies, pediatric patients or patients with a femoral diameter less than 4 mm, patients with previous history of autoimmune diseases, patients who were performed arterial access through the arterial graft, with bleeding disorders and with number of platelets < 100,000. In the studies performed, symptomatic lower extremity ischemia associated with the device was reported in 0.2% of the patients. The causes of this condition include malformation of the device, intimal dissection and significant atherosclerosis at the puncture site. In addition, diabetes, obesity, peripheral vascular disease and ischemic heart disease may also contribute this situation. Acute arterial ischemia due to VCD is an uncommon complication and immediate surgical treatment is unavoidable in this case. Therefore, VCD should be used in appropriate patients and with caution.

**Keywords:** Arterial catheterization, arterial occlusive diseases, complications, vascular closure devices

## PP-0947 [Thromboembolism, Anticoagulants]

## Surgical Complications and Clinical Course in Patients Using Oral Anticoagulant and Antithrombotic Drugs

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**Objective:** The aim of this study is to evaluate the complications arising from the widespread use of oral anticoagulant and antithrombotic drugs and to clarify the factors that may cause these complications.

**Material and Methods:** Forty-seven patients who had been hospitalized in our department due to complications arising from oral anticoagulation and antithrombotic drugs were included in this retrospective clinical trial. These complications and the factors that might be affecting these complications were investigated.

**Results:** It was determined that 44 of the 47 patients with coagulopathy due to warfarin use were conservatively treated and 3 were found to have been operated. It was observed that with the increase in warfarin sodium use, bringing the duration of the INR under control increased ( $p < 0.001$ ). Of the 44 patients under observation, one of them became exitus, while one of the 3 patients who had been operated also became exitus. It was observed that advanced age and comorbidities increased mortality ( $p < 0.001$ ). Presence of trauma, PZ, and INR values at the time of admission were not found significant factors affecting mortality. Patients who became exitus were found to have earlier hospitalization ( $p < 0.001$ ). Patients with less frequent INR were found to have a higher INR at the time of admission ( $p < 0.001$ ). In this study, most of the patients were treated with conservative treatment.

**Conclusion:** Complications following oral anticoagulant and antithrombotic drug use are more mortal with increased age and comorbidities. Intramural hematomas, rectus hematomas and retroperitoneal hematomas must be considered and investigated in the case of an International Normalized Ratio (INR) prolongation with a history of anticoagulant use in a patient presenting with abdominal pain and obstruction symptoms. Early diagnosis and medical follow-up is very important because it can provide favorable response to treatment without requiring surgery for the majority of patients.

**Keywords:** Oral anticoagulation, antithrombotic, surgical complication, clinical course

## PP-0948 [Thromboembolism, Anticoagulants]

## A Rare Anomaly: Inferior Vena Cava Agenesis Presented with Abdominal Pain

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**Introduction:** Our aim is to present a rare case presenting with abdominal pain and that cause serious clinical pathologies.

**Case:** Physical examination revealed abdominal tenderness in a 52-year-old male patient with a complaint of abdominal pain. According to the patient's abdominal x-ray in standing position, his vital findings were stable and there were no leukocytosis. When the patient's anamnesis was investigated deeply, it was learned that he had been followed up with hirschprung prediagnosis when he was 3 months old. When he was 15 years old, he underwent immediate sigmoid colectomy with a diagnosis of toxic megacolon and upon the presence of ganglion cells in his pathology report and the patient had been diagnosed with hirschprung. Computed tomography revealed vena cava inferior (VCI) was in traceable subradiaphragmatic and hepatic levels, and subdiaphragmatic inferior vena cava had no inferior continuity (agenesis?), left pelvic was dilated in infrarenal area and there were tortious collateral venous structures. In bilateral lower extremity doppler imaging, continuous deep venous flow reflux (deep venous insufficiency symptom, history of DVT sequellae) was detected with valsalva in both main-left superficial femoral vein. It was seen that he had received anticoagulant therapy due to DVT.

**Conclusion:** The anomalies of VCI may usually occur with indeterminate symptoms such as non-specific, asymptomatic abdominal pain in 0.5% of the general population. In the literature, 82% of the VCI-DVT cases are males. Depending on the presence of vascular pathology and the degree of DVT, anticoagulant treatment is prioritized and surgical treatment is rarely considered.

**Keywords:** Vena cava agenesis, abdominal pain, DVT

## PP-0949 [Thromboembolism, Anticoagulants]

# Early Surgery in Acute Superior Mesenteric Artery Thrombosis

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**Introduction:** Superior mesenteric artery embolism (SMAE) is a very rare condition. In case of a late clinical diagnosis, morbidity and mortality rates are high. Early diagnosis and treatment are very important since delayed diagnosis may result in bowel ischemia and consequently necrosis of the bowel. Because the clinical symptoms to be detected in the patient are not specific, delayed diagnosis and improper treatment may occur. Recently, SMAE is treated without performing intestinal resection with the help of earlier diagnosis via more frequently used contrasted abdominal tomography. In this study, we aim to present embolectomy treatment with fogarty catheter in a patient diagnosed with SMAE in the emergency service.

**Case:** A 51-year-old male patient presented himself to the emergency service with nonspecific abdominal pain that had been lasting for about a week. He did not have any significant features in his biography and family history. Physical examination of the patient revealed deep palpation of the epigastrium with pain and pulse at one hundred twenties. In laboratory tests; lactic dehydrogenase (LDH) and leukocyte levels were high. Upon detecting acute embolism in SMA in his contrast-enhanced CT, the patient was operated in emergency conditions. In his intraoperative view; ischemia and color change were detected in all small intestines approximately 60 cm distal of from the ligament of Treitz and the right colon. Pulse was not obtained from 5 cm distal of SMA. There was no necrosis. The transverse column meso was opened and the SMA was isolated and suspended. Arteriotomy and embolectomy were performed with fogarty catheter. The embryo material of all size was removed. SMA was washed with abundantly heparinized physiological saline solution. After closing the SMA primarily, it was observed that the distal pulse returned and the intestine regenerated. The patient underwent heparin therapy in the postoperative period and discharged on the 6th day with low molecular weight heparin upon improvement in his general condition.

**Conclusion:** SMAE is a fulminant condition with severe morbidity and mortality. Despite all advances in the field of radiology and surgery, SMAE-related mortality is very high. As a result, early diagnosis and surgical treatment in these patients contribute to the increase of the patient's quality of life while reducing the mortality rates without bowel resection requirement.

**Keywords:** Superior mesenteric artery embolism, acute mesenteric ischemia, embolectomy

## PP-0950 [Thromboembolism, Anticoagulants]

# The Cause of a Rare Left Upper Quadrant Pain; Splenic Infarction Developed Upon the Occurrence of Infective Endocarditis

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A 29-year-old male patient presented to our immediate surgery department with complaints of 2 days of ongoing left upper quadrant pain and fever, without nausea and vomiting. Except for the exodontia that had taken place 4 months before, the patient had no problem in his history. It was learned that the patient consumed 10 packs/year of cigarettes. There was sensitivity in the upper left quadrant of the abdomen with no defensive rebound. Traube was clear. Circulation examination showed diastolic murmur in S1-S2 3/6 and janeway lesions in palmar surfaces of bilateral hands were observed. ECG showed ST elevation in D1-D2, T negativity in D3, and ST elevation in V4-5-6. On abdominal CT, a 6x6.5 cm hypodense area (splenic infarction area) in the spleen extending from the caudocranial was observed. Macro-vascular structures were normal in the splenic hilus. In the ECO, an image that suggested moving filamentary vegetation between the mitral valve under noncoronary cuspid and the aorta, and a moderate eccentric aortic failure were observed. The patient was admitted to the cardiovascular surgery department with aortic valve insufficiency on the infective endocarditis origin. Broad spectrum antibiotherapy, DMAH, hydration and O2 (2 lt/min) were initiated. Aortic valve replacement was performed in the patient. The patient was followed up post-operatively under antiagregant and antibiotherapy. After postoperative 15 days, the abdominal CT showed growth was not observed in the infarction area of the spleen. The patient without any splenic infarct complications was followed conservatively. Splenic infarction is a rare cause of abdominal pain in the left upper quadrant and epigastrium. In splenic infarct cases, thromboembolic diseases, hematologic diseases, vascular anatomical differences or trauma may take place in the etiology. After a dental surgery, splenic

infarcts cases caused by infective endocarditis should be kept in mind in left upper quadrant pain. Structural heart diseases that are related with infective endocarditis should be recognized in time, and prophylactic anticoagulant and antibiotic therapy should be started before the invasive procedure. If necessary, the patient should be directed to surgery rapidly.

**Keywords:** Infective endocarditis, splenic infarction, abdominal pain, left upper quadrant pain, aortic insufficiency

## PP-0951 [Thromboembolism, Anticoagulants]

# Acute Mesenteric Ischemia with Superior Mesenteric Artery and Thrombosis in Superior Mesenteric Vein: A Rare Case Report

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**Introduction:** Acute mesenteric ischemia (AMI) whose prognosis is quite a bad pathology leads to acute abdomen. AMI may occur due to arterial or venous blood flow occlusion, or non-occlusive obstruction and it indicates that intestinal hypoperfusion has a sudden onset. While occlusive arterial occlusion is usually caused by embolism and thrombus in the mesenteric arteries, venous occlusive obstruction is commonly caused by thrombosis or segmental strangulation. We aimed to present acute mesenteric ischemia due to both superior mesenteric artery (SMA) and superior mesenteric venous (SMV) thrombosis in our case.

**Case:** An 87-year-old female patient was admitted to the emergency department with a 1-day of ongoing abdominal pain complaint. Abdominal pain was persistent and in the periumbilical region. She had chronic hypertension. Physical examination revealed tenderness in the periumbilical region. Laboratory findings showed that the white blood cell count was  $7.4 \times 10^3$  U/L, C-reactive protein was 2.54 mg/dl. Complete abdomen computed tomography (CT) revealed an increase in nonspecific density of the mesentery. The patient was hospitalized since her symptoms did not regress during her follow-ups despite medical treatment. On the second day of hospitalization, on the physical examination of the patient, the complete abdominal CT was re-performed at the level of angiography upon having a defensive development in abdominal periumbilical, right middle quadrant, and in the left middle quadrant with  $17.8 \times 10^3$  U/L of white blood cell count. According to the CT, there was thrombus in the superior mesenteric artery and the superior mesenteric venous distal and it was interpreted as there was an increase in contrast in the walls of the small intestinal loops in the lower left quadrant. Due to the patient's acute abdomen and acute mesenteric ischemia revealed in the CT, the patient underwent laparotomy. In laparotomy, there was minimal purplish color change in the wall of all small intestinal segments from treitz to terminal ileum, and bowel mobility was also present. Superior mesenteric artery and superior mesenteric vein were canalized selectively. With transverse incisions, embolectomy was performed with the help of 3F and 4F Fogarty catheters and the operation was terminated to allow for second look operation. Patient was hospitalized in the intensive care unit and was initiated on wide spectrum antibiotic, nasogastric decompression, and intravenous heparin treatment. At the second look operation performed on the postoperative 48th hour, transmural ischemic and occasional gangrenous intestinal segments were present in all segments from the treitz ligament to the terminal ileum. These segments were resected and gastroileostomy was performed. The patient was announced exitus on the first day of the second operation.

**Conclusion:** Acute mesenteric ischemia (AMI) is a life-threatening vascular urgency that requires early diagnosis and treatment. The four main reasons of acute mesenteric ischemia are; superior mesenteric artery embolism (50%), superior mesenteric artery thrombosis (15-25%), mesenteric vein thrombosis (5%), non-occlusive ischemia (20-30%) and the likelihood of thrombosis in both SMA and SMV is very rare. We believe that, in spite of early diagnosis of AMI and early medical and surgical treatment, thrombosis in both SMA and SMV might have contributed poor prognosis and increased morbidity and mortality.

**Keywords:** Acute mesenteric ischemia, superior mesenteric artery thrombosis, superior mesenteric vein thrombosis

## PP-0952 [Thromboembolism, Anticoagulants]

# Treatment of Central Venous Catheters that Are Occluded in Dialysis Patients Using Alteplase

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**Objective:** Alteplase is a thrombolytic drug that is used for treatment in cases where acute myocardial infarction or embolism is present. Tissue is the plasminogen activator. This study discusses the efficacy and side effects of the drug used to open occluded hemodialysis catheters.

**Material and Methods:** Dialysis patients who had experienced hemodialysis catheter occlusion and alteplase administration in the last 2 years were included in the study. Patients with known mechanical obstruction, heavy bleeding and risk of embolization were excluded from the study. A total of 10 ml alteplase vials were added into 100 ml of two physiological saline solution (5 ml of alteplase each) and they were administered in either of the tunnels separately within 30 minutes. The catheter was checked 60 minutes after the operation and the patients were discharged after at least 6 hours of monitoring. Patients were monitored for side effects that could develop within 30 days after the procedure. Side effects and efficacy of the drug were questioned.

**Results:** The medication was used on a total of 18 patients (12 males, 6 females, average age 46 years) and 17 patients used the catheter effectively after the procedure. One patient was referred to neurology department due to involuntary movements that developed 2 days after the procedure. The patient's brain MR was taken, no evidence of intracerebral hemorrhage was seen. It was determined that their complaints gradually decreased in the following days.

**Conclusion:** Alteplase is an effective agent that can be used to open an occluded hemodialysis catheter. Side effects and efficacy will become clearer with increasing number of patients.

**Keywords:** Alteplase, tissue plasminogen activator, hemodialysis catheters, side effects

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## PP-0953 [Thromboembolism, Anticoagulants]

# Pharmaco-Mechanical Treatment of Acute Iliac Vein Thrombosis in a Patient with Chronic Deep Venous Thrombosis: A Case Report

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**Introduction:** Deep vein thrombosis (DVT) is a pathology that may cause significant mortality and morbidity if untreated. It occurs with symptoms of pain, swelling, tenderness and redness developed due to the obstruction of one or more venous thrombus in the deep venous system. Treatment options include oral anticoagulants, low molecular weight heparin, and recent oral anticoagulants and pharmacomechanical thrombectomy procedures. While interventional therapies are applied in cases of acute thrombus, their efficacy in chronic cases is unfortunately limited. For this reason, medical treatment is still the most important option in chronic cases. Today, the number of cases of acute and chronic lesions as a result of increased life expectancy and recurrence rates has increased. To what extent pharmacomechanical treatment will find its place in the treatment of combined cases?

**Case:** The patient who presented himself to the emergency service of our hospital with complaints of fulminant pain, cyanosis and swelling on the fingers was performed lower extremity venous color doppler ultrasonography (CDUS) and then was diagnosed with acute iliac vein thrombosis on the basis of chronic popliteal vein thrombosis. When it was observed coldness and cyanotic changes on the toes of the patient, he was taken to the angiography unit for emergency pharmacomechanical treatment due to the risk of critical lower limb ischemia. In order to reduce the risk of pulmonary embolism during the procedure, a vena cava filter was inserted through the intervention from right femoral vein. Pharmaomechanical thrombectomy was then performed by cannulating the left femoral vein guided with CDUS. After the procedure, the iliac vein was opened. 24 hours after the procedure, improvement was observed in the patient's clinical and physical examination findings and compared to the patient's preoperative condition, a 3 cm decrease in diameter was measured on the left lower extremity thigh. In the 1st postoperative follow-up, the iliac vein lumen was found to be open.

**Conclusion:** We believe that pharmacomechanical treatment of acute venous thrombosis is a new treatment option with rapid, effective and satisfactory results.

**Keywords:** Pharmaco-mechanical thrombectomy, acute venous thrombosis, chronic venous thrombosis, critical limb ischemia

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## PP-0954 [Thromboembolism, Anticoagulants]

# Massive Rectus Hematoma Associated with Subcutaneous Enoxaparin Use

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**Introduction:** Low molecular weight heparin (LMWH) has been increasingly used by doctors in many clinical situations such as deep vein thrombosis, atrial fibrillation and pulmonary embolism. LMWH is generally safe due to improved bio-

availability and pharmacodynamics. Therefore, its subcutaneous use is performed by nurses, patients and even those with appropriate training. In this article, it is aimed to present a case that is complicated with type 3 massive rectus hematoma after subcutaneous enoxaparin injection due to pulmonary embolism.

**Case:** Eighty-four-year-old female patient was referred to the emergency service from the external center with the complaint of abdominal pain with sudden onset which was not associated with trauma and that had been going on for two days. It was learned that the patient had been treated for massive pulmonary embolism 3 weeks before and then admitted to the chest diseases hospital when the complaint of shortness of breath had continued and been initiated on anticoagulant treatment via low molecular weight heparin with 0.6 IU 2x1 dose (enoxaparin). At the time of admission, ECG revealed the presence of atrial fibrillation, that the number of respiration was tachypneic and the oxygen saturation was 89%. The examination showed tenderness in the right lower quadrant and hypogastric region, a palpable mass and ecchymosis on the right abdominal wall. Laboratory tests revealed that urea: 150 mg/dl, creatinine 2.5, hemoglobin 8.2 g/dL (12.0-16.0), active partial thromboplastin time 30 sec (22.6-35), and prothrombin time 12 sec (11.4-15.5). The patient was monitored in the surgical intensive care unit. Unenhanced abdominopelvic tomography revealed a 10x15 cm of high-density locular fluid area on the right quadrant, in the anterior of urinary bladder and a hematoma of 73x42 mm in the right rectus region associated with this area. Type III rectus sheath hematoma diagnosis was made. Anticoagulant therapy was discontinued in the patient. Upon the decrease in hemoglobin values, a total of 5 units of erythrocytes and 3 units of TDP were administered. Due to concomitant embolism and renal failure, prophylactic interventional and surgical treatments were considered unsuitable and a standard IV heparin 5000 IU 2x1 infusion was initiated. The patient's hemoglobin level elevated to 10.4 gr/dL and aptt values were 1.5 times than the normal. Her oral intake started. Subsequently, on the 14th day of her admission, due to sudden decrease of O<sub>2</sub> saturation and respiratory distress which required mechanical ventilation, the patient became exitus.

**Conclusion:** Hemorrhage in type III hematoma occurs between the muscle and the transverse fascia, in the peritoneum and pre-vesical regions. Blood transfusion and blood products may be required. Surgical intervention might be required for hematomas that can not be controlled and that progress in size. Morbidity and mortality rates are higher in patients who are on anticoagulant treatment, with large hematomas, advanced age, and severe co-morbidities. Rectus sheath hematoma has been reported to have a mortality rate of 1.6-25%. The possible underlying mechanism is believed to be the combination of accidental intravenous injection of enoxaparin or damage of epigastric vessels with rich anastomotic nerves at the injection sites and a significant anticoagulant effect in the elderly.

**Keywords:** Rectus hematoma, low molecular weight heparin, pulmonary embolism

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## PP-0955 [Wound, Wound Care, and Burn]

# The Relationship of Bonzai Use with Burns

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**Objective:** We aimed to determine the incidence of substance dependence in patients who were followed up on the burn unit. We investigated the relationship between burns and especially recently increased use of bonzai which is type of a synthetic cannabinoid, in Turkey and we examined its effects on morbidity and mortality.

**Material and Methods:** During the year 2017, 11 patients hospitalized in University of Health Sciences, İstanbul Bağcılar Training and Research Hospital Burn Unit were examined retrospectively in terms of age, gender, length of stay, causes of burn, morbidity and mortality.

**Results:** In 2017, 11 of the 112 patients hospitalized in the intensive care unit of the burn unit had the history of substance use, and 8 were known to use bonzai. The average age was 30.6 years and all of them were male. While the average length of stay in the unit was 14 days, it was 20.6 among cases with the history of bonzai use. Eight patients were followed up at the ICU. It was observed that the average length of stay in the whole unit increased to 20.6 days in patients with a mean duration of hospitalization of 14 days and those with a history of bones. Eight of these burn cases were caused by flame and mortality was not observed. Of the 112 patients, 6 were found to undergo amputations, while 3 of them were found to be bonzai users.

**Conclusion:** Burn clinicians should be aware of the increased use of addictive substances such as bonzai, should know that the course of burns associated with substance use and the duration of hospitalization differ according to other burn patients.

**Keywords:** Flame, bonzai, burn

## PP-0956 [Wound, Wound Care, and Burn]

# Application of Vacuum Wound Closure System on Necrotizing Fasciitis After Abdominopelvic Resection+Os Cocygys Resection

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**Introduction:** Necrotizing Fasciitis (NF) is a life-threatening soft tissue infection caused by the progressive necrosis of skin and subcutaneous tissue fascia. Various types of bacteria cause necrotizing fasciitis. The most common and known species is the Streptococcus group A. Treatment begins with strong antibiotics. Necrosis means that it is not possible for antibiotics to reach all of the infected areas. As a result, the necrotic tissue should be aggressively debrided. The prognosis of a 62 year old male patient with Rectum Ca diagnosis.

**Case:** A 62-year-old male patient admitted to our polyclinic with a complaint of abdominal pain. 28 day neoadjuvant radiotherapy was given to the patient who were diagnosed with Rectum Ca after the examinations. Abdominopelvic resection + os cocygys resection was performed as a secondary treatment. On the postoperative 4th day, after the culture taken from the gleet coming from sacral region, it was observed that E. coli and Klebsiella tigecycline-sensitive carbapenem resistant Enterobacteriaceae had reproduced. No improvement was observed in the wound site of the patient after the treatment with vancomycin and Meronepem. On the postoperative 18th day wound site debridement and vacuum wound closure system were administered. On postoperative 37 day, a muscle-skin flap was applied in a 25x20 cm deep pouched defect area of the patient's sacral area. After the suturation, 8x1 cm area in the donor area was left for secondary healing. On the postoperative 75th day, lateral ends of the flaps performed in the sacral region were refreshed and the area of approximately 6x8 cm which had been left open was skin grafted using the skin taken from the femur. The problem was exterminated on the postoperative 117th day.

**Conclusion:** Vacuum wound closure application is a good treatment option that accelerates wound healing through an increase in local blood flow, acceleration of granulation tissue development, control of edema and exudates.

**Keywords:** Vacuum, wound, treatment

## PP-0958 [Wound, Wound Care, and Burn]

# Burn in Geriatric Patients

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**Objective:** According to the data provided by Turkey Statistical Institute, while the elderly population in our country (65 and over) in 2012 was 5 million 682 thousand and 3, this number has increased in the last 5 years by 17.1% and reached 6 million 651 thousand 503 in 2016. As it is known, with aging neurological functions, musculoskeletal system weakness, patients' consciousness, awareness, motor and sensory functions decrease. In addition, the blood circulation system and the nutritional system are distorted. Wound healing process becomes more difficult with the inclusion of comorbidities. This prone-to-trauma group is expected to suffer more damage and the healing-treatment process is more difficult. Geriatric burns are a special group of all burn patients and should be handled specially. In this retrospectively planned study, our aim is to evaluate geriatric burn patients in terms of etiology, treatment approach and prognosis.

**Material and Methods:** 65 years and older patients, who were hospitalized in the Burn Center of Republic of Turkey Ministry of Health, University of Health Sciences, İstanbul Bağcılar Health Practice and Research Center (UHS BAĞCILAR HPRC), were examined in terms of etiology, percentage of burn, co-morbidities, length of stay, and mortality-morbidity.

**Results:** Between 2016 and 2017, we treated and monitored 156 patients aged 65 and above in our burn unit and in the ICU. Of these patients, 69 were male and 87 were female with an average age of 75 years. While the average stay in the service was 2.1 days, in the intensive care unit it was 12.3 days. While there was no mortality in the patients who had been followed up in the service; 8 of the 17 patients that had been followed in the burn intensive care unit became exitus. The cause of the burns of the patients is mainly due to the flames or hot matter from the house accidents.

**Conclusion:** Geriatric patients comprise a small but significant percentage of the population. While there was no mortality in the patients who were followed in the service, the duration of hospitalization was observed to be prolonged due to the presence



of co-morbid diseases. It is noteworthy that intensive care follow-ups had especially mortal course. In terms of etiology, home accidents constituted the majority. At the same time, their long duration of the ICU stay was noteworthy since they needed monitoring provided by ICU unit. In this context, we recommend that burn clinicians be more careful in the follow-up and treatment of geriatric patients.

**Keywords:** Flame, geriatrics, burn

## PP-0959 [Wound, Wound Care, and Burn]

# It is Important to be Careful in the Follow-Up and Treatment of Decubitus Ulcers: Decubitus Ulcers May Cause Fournier Gangrene

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**Introduction:** Fournier gangrenous is infectious necrotizing fasciitis of perineum and genital area. The mortality rate in Fournier gangrene is up to 67%. Care must be exercised in the follow-up and treatment of patients with decubitus ulcers. Fournier may cause gangrene. Early identification of Fournier's gangrene and extensive surgical debridement immediately after diagnosis are life-saving.

**Case:** The patient who presented himself to the emergency service with the complaints of discharge and pain due to decubitus ulcer and whose left leg was amputated from the knee down had been followed up by infectious diseases and plastic surgery departments. Despite the oral antibiotic treatment (Moxifloxacin 1x1 tb), the patient complained of pain and purulent discharge, and the patient was evaluated for abscess or fistula. Patient's contrast-enhanced pelvic magnetic resonance imaging (MR) that had been performed at the external center was interpreted by the radiology department. Extensive soft tissue inflammation extending from the sacrococcygeal region in the pelvic region to the gluteal region and the perineum in the right side, a deeply located abscess collection in the right side of the perineum and enlarged lymph nodes in both iliac obturator chains were detected. The laboratory results of the patient were: serum creatinine: 5.8 mg/dL, ALT: 49 U/L, AST: 96 U/L, Ca: 6.56 mg/dL, CRP: 358 mg/L and white blood cell: 15,510x10<sup>9</sup>/L. Intravenous (iv) antibiotic therapy with piperacillin + tazobactam was initiated by the Department of Infectious Diseases for the treatment of sepsis. The patient was operated under local anesthesia and sedation in the lithotomy position. The right pararectal area was enlarged with finger dissection and the abscess/collection at the end of the existing decubitus ulcer was removed. It was seen that the collection had been placed at the end of the pouch of decubitus ulcer. In addition, right perianal and scrotal areas were exposed and debrided. The wound was washed with oxygenated water and povidone iodide solution. Colostomy was also performed to the patient so that the wound would not be smeared with gaita. The wound was debrided twice more every three days after the surgery. Improvement in creatinine values was observed with iv hydration in the direction of the nephrology department's recommendation. With the help of intravenous antibiotic therapy and vacuum assisted closure (V.A.C.) complete recovery was provided on the patient's wound.

**Conclusion:** Decubitus ulcers in patients with spinal cord injuries increase the risk of Fournier's gangrene development. Vacuum-assisted closure (V.A.C.) in Fournier gangrenous paraplegic patients who develop secondary decubitus ulcers due to ischialgia pressure facilitates the closure of the wound. Treatment of Fournier's gangrene due to decubitus ulcer requires interdisciplinary collaboration. It is essential that urology, radiology, infectious diseases, internal diseases, nephrology, general surgery and plastic surgery departments work in cooperation in the treatment of patients with Fournier gangrenous. Decubitus ulcer may cause Fournier gangrene. Early identification of Fournier's gangrene and extensive surgical debridement immediately after diagnosis are life-saving. Vacuum assisted closure (V.A.C.) helps to close the defect at the wound site in patients who have been operated on due to Fournier's gangrene.

**Keywords:** Fournier, gangrene, decubitus, compression, ulcer, wound

## PP-0960 [Wound, Wound Care, and Burn]

# Skin Staples that Are Not as Innocent as They Seem: A Small Bowel Injury due to Skin Staples after Evisceration

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The word "stapler" was first used in 1901 by American Munsey Magazine to describe a machine holding a thin metal wire with paper. In the following years, the skin staples from the automated stapler devices produced by the developing technology were started to be used to close the surgical incisions. The fact that the skin stapler can be used with little experience, that they shorten the operation and duration of the anesthesia have made it be frequently preferred to close surgical incisions. In our patient who had been operated under immediate circumstances with septic symptoms due to delayed referral of peptic ulcer perforation, abdominal median incision was closed with skin staples. On the fourth postoperative day, evisceration of the small intestine from the incision line due to severe coughing developed. We aimed to draw attention to patient selection for the use of skin staples due to damage caused by skin staples in the small intestine meso and serosa.

**Keywords:** Skin staples, evisceration, wound healing, wound closure techniques

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## PP-0961 [Wound, Wound Care and Burn]

# Evaluation of the Effect of Topical Coenzyme Q10 in Experimental Burn Model in Rats

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**Objective:** Effective and successful treatments of burned patients are still an important medical problem and there is limited data on the efficacy of coenzyme Q10 (CoQ10) in burn wounds. In this study; we aimed to investigate the effect of topically applied CoQ10 on wound healing in burned rats.

**Material and Methods:** Twenty-seven Wistar Albino rats weighing 200-240 g were divided into 3 equal groups (n=9) and all rats were under general anesthesia. The backs of Group 1 were shaved and no further intervention was done. The back part of Group 2 and Group 3 was shaved and the shaved area was contacted with water at 95 C for 10 seconds. The rats were wrapped in cold towels after the burn application and 8 ml of intraperitoneal ringer lactate solution was given to prevent burn shock. Group 2 received silver sulphadiazine and Group 3 received sterile derivative of 10 mg/kg CoQ10 which was prepared with normal saline topically everyday. Biopsies were taken for histopathological examinations under general anesthesia from burned tissues on days 3 and 10 and the rats were sacrificed. Histopathologic parameters were assessed by Hematoxylin & Eosin and immunohistochemical free oxygen radicals were assessed by Glutathione S-transferase, Glutathione Reductase, Superoxide dismutase, and Catalase.

**Results:** In CoQ10 applied group; there was no statistically significant difference in inflammation, epidermal, vascular, collagen damage in samples taken at both 3rd and 10th days. In terms of edema parameters; a statistically significant difference was detected between the 10th day samples of the group for which CoQ10 was applied and the 3rd day samples of the group for which silver sulfadiazine was applied and it was determined that these parameters increased. In terms of free oxygen radicals immunohistochemically, a statistically significant difference was detected between the 10th day samples of CoQ10 and silver sulfadiazine applied groups and it was determined that these parameters increased.

**Discussion:** No positive result has been obtained that CoQ10 reduces the incidence of burn injury, but this substance has been found to increase free oxygen radicals in tissues in immunohistochemical analysis to detect tissue edema and oxidative stress.

**Keywords:** Burn, topical coenzyme Q10, free oxygen radicals

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## PP-0962 [Wound, Wound Care and Burn]

# Fast and Fatal Necrotizing Fasciitis

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**Introduction:** We wanted to present a rapid and fatal case brought to the emergency service with an abdominal pain and without inflammation and crepitation was taken in deep palpation and radiology was helpful in diagnosis.

**Case:** A 78-year-old female patient with abdominal pain and mental state change for 3 days was brought to our emergency outpatient clinic. She had a history of diabetes and 20 days of NSAID use. She had mental fog and Tension: 90/50 heart rate, pulse: 140/min, fever: 38.5 degrees, BMI: 45. She had no distension in abdominal examination and tenderness in all quadrants and crepitus was found in deep palpation. There was no temperature, redness, edema, or open wound on the skin. Laboratory findings were as follows: leukocyte: 20.000, Hb: 10.2 gr/dl, hct: 30.8%, albumin: 1.5 gr/dl, glucose: 304 mg/dl, creatinine: 0.6, CK: 442U/l, INR: 1,58, CRP: 24 mg/dL. serum Na: 135 meq/l. Wide air images progressing along the fascia extending to the inguinal and genital area below and lumber region in the entire abdominal wall was observed. No pathology was detected in the internal abdomen. She was urgently taken to the operation with the prediagnosis of NF. Grey-brown color change was observed in the subcutaneous fat tissue and on fascia at exploration. The vessels were thrombosed and diffuse necrosis were observed. Aggressive debridement was applied. Postoperative. She was referred to postoperative reanimation clinic. Debridements were repeated on day 1 and 2. But the patient is was exitus on the 2nd day.

**Conclusion:** NF is a rare but lethal soft tissue infectious disease with rapid tissue destruction and systemic toxicity. Early diagnosis and aggressive surgical debridement reduce mortality and morbidity but it is difficult to diagnose. It is usually seen in perineum and the body. Etiologically, they are isolated from *S. aureus*, *S. pyogenes* enterococci, as gr(+) organisms and from *E. coli*, types of *Pseudomonas* as gr (-) organisms and from bacteroides and *Clostridium* types as anaerobes. *Acinetobacter* spp. reproduced in the tissue culture. Additionally they were consistent with changes associated with necrotizing fasciitis in the histopathology. Risk factors for NF were; Diabetes, CRI, immunosuppressive drug use, malnutrition and the underlying malignancy and obesity. NSAID and NF relationship have been shown. Our patient had a history of diabetes and NSAID use history. NF usually has inflammation in skin. In our case there was no skin findings but she had severe pain and deep crepitation was observed with palpation. Crepitation is seen at 18% and is a poor prognostic indicator. Abdominal CT performed to help in diagnosis is 80% sensitive in detecting NF.

It is important to detect the depth and breadth of the infection. It helped to diagnose quickly and to begin treatment without delay. However, the patient showed a very rapid progression and she was exitus. As a result, NF is a rare condition with high morbidity and mortality. Clinicians should consider NF in patients with skin erythema, fever and pain, especially immunodeficiency and chronic disease. The guidance of radiology should also be remembered.

**Keywords:** Mortality, necrotizing fasciitis, tomography

## PP-0963 [Wound, Wound Care and Burn]

# Recurrent Burn due to Bonzai Use: Case Report

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**Introduction:** We aimed to present our patient who admitted to University of Health Sciences İstanbul Bağıcılar HARC Burn Unit by burning twice in the same year and in line with this patient we aimed to share the treatment differences and the necessary precautions to be taken in recurrently burned patients.

**Case:** A 22-year-old male patient who admitted to the external center due to burn during bonzai use was interned with a total of 30%, 2, and 3 degree flame burns in the bilateral lower extremity and was discharged after 2 months of treatment with autologous skin graft following repetitive debridements. The patient continued to use drugs and after 4 months of his discharge he admitted to our center again with similar burns in the same regions. The patient was followed in intensive care unit with the diagnosis of 3rd degree having a total of 30% flame burn in bilateral lower extremity. At the time of hospitalization, no circulation could be provided in the right leg of the patient despite fasciotomies and below knee amputation was performed. Despite continuing hyperbaric oxygen therapy with 47-day multi-disciplinary intensive care and service follow-up, a similar situation was experienced for the left leg of the patient and amputation decision was taken. After bilateral lower extremity amputation, the patient was discharged with recovery.

**Conclusion:** We see in this example that we should be more cautious in situations that cause recurrent burns such as increased drug use, psychopathological problems, diabetic neuropathy and mental retardation. In this patient with Bonzai use history, the first treatment remained ineffective due to the continued use of the substance and resulted in extremity loss. Raising awareness of patients and their relatives, providing the necessary rehabilitation, and regulating the living area appropriately increases the success rate in the patients in the risk group.

**Keywords:** Bonzai, substance dependency, recurrent burn, burn

## PP-0964 [Wound, Wound Care and Burn]

# The Effects of Carbon Dioxide-induced Pneumoperitone on Peritoneal Structure

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**Objective:** As laparoscopic surgeries have begun to be performed many gases have been tried to form pneumoperitoneum. Among these, carbon dioxide gas has still the most common use. Pneumoperitoneum formed with carbon dioxide causes some undesirable changes on the peritoneal structure even though it creates a suitable area for surgeons during laparoscopic operations. Although some of these side effects are inevitable, some side effects may change depending on the application.

**Material and Methods:** This article was prepared considering the experimental and clinical studies in the literature on the effects of carbon dioxide induced pneumoperitoneum on the peritoneal structure.

**Results:** Pneumoperitoneum formation affects the peritoneal environment and therefore the organism. This effect is due to intraabdominal pressure increase, local peritoneal destructive effects of carbon dioxide, carbon dioxide absorption and chemical metabolic changes. The rate of insufflation and its pressure usually make hemodynamic changes. Hypoxic and toxic effects of carbon dioxide, its dryness and coldness cause structural deterioration of peritoneal environment.

**Conclusion:** Laparoscopic surgery is becoming widespread every day. For this reason, it is important to have awareness of the effects of pneumoperitoneum, especially in patients with comorbid diseases or obese patients. We are of the opinion that this awareness will reduce the impact of unwanted changes in the pneumoperitoneum of patients.

**Keywords:** Carbon dioxide, pneumoperitoneum, laparoscopy, carbondioxide insufflation

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## PP-0965 [Wound, Wound Care and Burn]

# Comparison of the Effects of Ozone and N-Acetylcysteine on Burn Stasis Zone

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**Objective:** In this study, it was aimed to save stasis zone by intraperitoneal application of N-acetylcysteine and ozone in the rats by forming an experimental burn model and to compare the biochemical and pathological findings after the treatment.

**Material and Methods:** 24 female rats were included in the study. The rats were divided into three equal groups. Tissue specimens were taken from the rats at the end of the 10th day.

Group 1; Intraperitoneal control group

Group 2; Ozone was administered intraperitoneally at a dose of 10 µg/mL daily for 10 days.

Group 3; N-acetylcysteine was administered intraperitoneally at a dose of 100 mg/kg daily for 10 days.

The rats were subjected to the burn model defined by Regas and Ehrlich. To form this burn model, a comb-shaped tool with four rectangular contact areas of 1x2 cm in size was used and in the back of the rats 4 burn regions of 2nd degree having rectangular shapes with the size of 1x2 cm in the middle line bilaterally in such a way that there would be 3 stable zones between them with the size of 0.5x2 cm were formed. The burned areas formed were considered as coagulation zones and the solid tissue areas of 0.5x2 cm between them were considered to be ischaemia (stasis) zone. For the study, 5 cc blood was taken from the tail vein of the rats and malondialdehyde, superoxide dismutase, catalase and glutathione peroxidase values were measured for comparison between groups.

**Results:** In our study; pathologically edema, hyperemia, epithelial degeneration, necrosis, inflammatory infiltration, fibrosis measurements were performed. When compared with the control group, the tissue damage score was lower in the group given intraperitoneal NAC. MDA level was found lower in the intraperitoneal NAC group than in the control group. SOD, catalase and GSH-Px levels were higher in the intraperitoneal NAC group than in the control group. MDA levels in intraperitoneal ozone group were lower than intraperitoneal NAC group. SOD, catalase, GSH-Px levels were higher in intraperitoneal ozone group compared to intraperitoneal NAC. We are of the opinion that prospective randomized, large-scale clinical trials are necessary to recommend the use of ozone as a standard wound care product. When ozone and N-acetylcysteine groups are compared, histopathological improvement findings in the ozone group are better and when ozone and N-acetylcysteine groups are compared; the positive effects of reducing the oxidative stress level of ozone and enhancing wound healing are more apparent than those of N-acetylcysteine.

**Conclusion:** In this study; it was determined that intraperitoneal ozone application on wound healing was superior to intraperitoneal N-acetylcysteine administration in the experimental wound model created in rats. We believe that prospective random-

ized clinical trials should be performed to use intraperitoneal ozone as a wound care product. The effects of ozone on the stasis zone, the most effective treatment dosage, the side effects, and the duration of treatment should be investigated in new studies and it should be considered as a molecule to enter into active clinical use.

**Keywords:** Ozone, N-Acetylcysteine, stasis zone

## PP-0967 [Wound, Wound Care and Burn]

# The Effect of Topical Epidermal Growth Factor on Wound Healing

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**Objective:** There are studies reporting that the topical epidermal growth factor contributes to the process by effecting cell proliferation and collagen increase on burns and diabetic foot injuries. The aim of this study is to investigate the effectiveness of the product as one of the first centers to use this newly licensed product in our country and to report its initial results.

**Material and Methods:** A total of 17 patients aged between 35 and 81 (mean age 60.7) were included in this study, 6 of whom were women and 11 were men. Patients had a history of diabetes ranging from 2 to 40 years (mean 22 years), 10 patients had arterial insufficiency and 7 had venous insufficiency. Diabetic ulcer sites are most frequently found in finger (33,3%) and secondly in the sole region (23,8%). The patients' debridement was performed surgically. Topical epidermal growth factor was applied to the wound surfaces of patients day after day. The duration of treatment varies between 11 and 180 days (mean 59.4 days). Chlorhexidine acetate or Ag alginate covers were used to cover the wound dressings of the patients. The injuries were assessed according to the Wagner criteria.

**Results:** According to the Wagner staging, 10 patients were evaluated as stage II, 2 patients were stage III, 4 patients were stage IV, and 1 patient was stage V. After treatment it was observed that two patients' wounds were completely closed (11,8%), ulcer areas decreased from 11,0 cmx4,5 cm to 8,4 cmx4,0 cm by providing adequate granulation at the wound site in 13 of the patients (76,4%) and wound healing could not be provided in 2 patients in stage IV and V (11,8%).

**Conclusion:** According to this study, the topical epidermal growth factor is effective in diabetic wounds ranging from Wagner's staging I-III. This product promises to protect patients from the major amputation in chronic wounds that do not have infection or osteomyelitis, can not be treated by vascular intervention, and result can be obtained by classical dressing. In order to confirm this interpretation in this treatment method which we report the first results, studies including more patients and more data are needed.

**Keywords:** Wound healing, growth factor, diabetes

## PP-0968 [Wound, Wound Care and Burn]

# Use of Dermal Collagen Implant in Electricity Shock Burns

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Dermal collagen skeleton is a wound care product used in the treatment of wounds that can not be covered with partial skin grafts or flaps used in burns and wound healing. In this case, we describe the results of closure of the deep tissue defect covering the wrist and sole of a 23-year-old patient having electricity shock associated 3<sup>rd</sup> degree burn complaint with a dermal collagen skeleton and a postoperative follow-up of 3 months. A 23-year-old male patient was admitted to the burn unit with a 5% third degree burn in both wrists and right foot due to electrical shock. On the first day, escharotomy and fasciotomy were performed due to the compartment syndrome developing in the left forearm and wrist. On the 10th day right toe amputation and debridement and on the 24th day, debridement and grafting were performed to the right hand and left hand finger. On the 38th day, dermal collagen skeleton was applied to the left wrist and foot sole. On the 58th day, the wounds were completely closed with grafting to the collagen skeleton applied regions. The patient had left ulnar nerve damage during the hospitalization and he developed claw hand deformity. In the outpatient clinic follow-up following discharge, it was seen that the patient walked comfortably without any complaints, he was able to move his left wrist comfortably without contracture, could hold the equipment and the

claw hand deformity disappeared. Joint burns that can not be covered with surgical methods such as grafting or flap, or disrupt the function of the patient are very common in electrical shock cases, but the morbidity contracture rate is high in these cases. The use of dermal collagen skeleton in such cases is thought to reduce morbidity.

**Keywords:** Electric shock, burn, dermal collagen skeleton

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## PP-0969 [Wound, Wound Care and Burn]

# Use of Postpartum Radiotherapy in the Treatment of Hypertrophic Scar and Keloid, Developing in Pregnancy after Milk Burn

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It is wound healing that causes severe itching, pain and cosmetic problems seen very commonly in hypertrophic scar and keloid burn patients. From time to time they can cause morbidity that can prevent the patient from maintaining his daily life. Hypertrophic scar is usually a fluffy healing that does not exceed the pink or red wound borders. Keloid is the fluffy healing that usually goes out of the wound borders and is in the skin color. We will try to explain the efficacy of radiotherapy in postpartum patients with hypertrophic scars and keloids that do not respond to cream, pomade and compression garment treatment. A 32-year-old female patient was admitted to our outpatient clinic due to swelling associated with a previous burn on the extensor side of the left arm, pain and itching. At the time of admission, the patient, who was 7 months pregnant, stated that her arm was burned 1 year ago with milk and her arm healed without blistering, she became pregnant 5 months after the burn, burn area began to blister from 2nd trimester, could not use her arm and sleep because of pain. On physical examination, there was a hypertrophic scar and partial keloid areas in the entire burn area of the left arm extensor. Postpartum compression garment was recommended to the patient who was taken into follow-up. However, there was no decline in her complaints. She said that she could not hold her baby because of pain and it was very difficult to breastfeed the baby. Steroid injection could not be performed because she was in lactation and it may cause systemic side effect. The patient was treated with 12 MeV of energy and 8 Gy of electron radiotherapy in a single fraction. In her follow-up 2 weeks later, she said that her pain stopped, itchiness significantly decreased and she could easily use her arm. Although there are not enough studies in the pediatric age group, there are many studies showing that hypertrophic scar and radiotherapy are effective in keloid treatment in adult patients. Because of the dramatic improvement in our patient, we think that radiotherapy is an effective treatment method for selected patients.

**Keywords:** Hypertrophic scar, keloid, radiotherapy

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## PP-0970 [Wound, Wound Care and Burn]

# Use of the Sural Nerve Graft in Conjunction with the Inguinal Flap in Managing the Tissue Defect in the Hand and Ulnar Nerve Damage Developing due to Electrical Burn

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**Introduction:** Electrical injuries seen most commonly after boil-burning and flame burns are important causes of morbidity and mortality. Different physiopathological explanations and different treatment approaches are being applied in high voltage electrical injuries occurring with very different mechanisms from the thermal burns. The most important factor in determining the prognosis of electric injury is the amount of voltage in the clinic divided into low and high voltage according to the 1000 volt limit. Hands are affected in 80% of the burned cases, despite being a small portion of the surface of the body. Hand burns require a therapist approach trained in edema control, wound/graft care, splinting, scar control and pain. Pedicle groin flap is an axial patterned flap originating from superficial circumflex iliac arterial. It is important as a good alternative providing an ad-

equate coverage in defects of various sizes located in different regions of the upper extremity having low donor area morbidity. Interfacial nerve graft is a useful method for repairing nerve defects. Sensory return to a certain degree is possible for a good motor function.

**Case:** A 20-year-old male patient was admitted to our clinic because of electrical burn. Physical examination revealed a 3-degree burn area in the right hand hypothenar region, extending into the lateral region of the wrist. The right hand and the forearm had ulnar nerve motor and sensory deficits. He had TA: 110/70 mmHg, pulse: 72/minute, fever: 37.2 C. No systemic pathology was detected in systemic examination. His biochemical values were normal. Wound was prepared for flap after serious dressing and debridements. The sural nerve taken from the left leg for the ulnar nerve defect was interfascicular grafted. The right superficial circumflex iliac artery pedicle was preserved and the fasciocutaneous inguinal flap was elevated. This flap was then sutured over the open wound to the hypothenar region of the right hand. After 3 weeks, he left the flap pedicle. The donor area was closed primarily.

**Conclusion:** Electrical burn is a common trauma in our country and in our region, which has a serious morbidity rate and causes the patient to stay in the hospital for a long time and to undergo numerous operations. Tendons, veins, nerves, bones and joints may be damaged in electrical injuries. Such injuries should be debrided with appropriate flaps in the a-early stage. Pedicled inguinal flap is a safe treatment alternative in the patient group in defects that can not be covered with local flaps and the structures such as bones, nerves and tendons are exposed due to high-voltage electrical burns of the upper extremity and the use of free tissue transfer is risky. Peripheral nerve injuries are pathologies that have extremely severe functional and aesthetic troubles. Nerve grafts are preferred for the management of these injuries in order to gain motor power and restrain holding functions of the hand.

**Keywords:** Inguinal flap, sural graft, electric flame

## PP-0971 [Wound, Wound Care and Burn]

# Examination of the Role of Burn Center in Toxic Epidermal Necrolysis Over A Case

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**Introduction:** Toxic Epidermal Necrolysis (TEN) is an immunocytotoxic destruction of keratinocytes that the body develops against various antigens. It is most often seen after the administration of drugs [antibiotics, allopurinol, nonsteroidal antiinflammatory drugs (NSAIDs), anticonvulsants] but also after infection, cancer and vaccination. Its incidence is 0.4-1.2/million people in the world. It is mostly seen in the adult age group but rarely seen in children. TEN has a mortality rate of 10-30%. In the lesions seen, there is a separation in the dermo-epidermis junction, including intact areas. Mortality frequently occurs due to infections secondary to skin lesions. As a 20% burn case requires immediate intervention, toxic epidermal necrolysis, which can hold up to 20% of the body surface area, requires immediate intervention. In these cases, topical wound care is an integral part of the overall treatment. Areas with epidermal loss can be mixed with partial thickness burns. In this presentation, we aimed to investigate the role of burn center following a case of TEN developing associated with gemifloxacin in epidermal lesions.

**Case:** A 61-year-old female patient with known heart failure, hypertension, COPD and chronic atrial fibrillation had used gemifloxacin 320 mg for the first time 10 days ago due to gastroenteritis. The patient who had clinical improvement had used gemifloxacin once again 3 days before he was re-diarrhea. The patient already used diltizem, aldactone, beloc, digoxin and xarelto and the patient admitted to our hospital because of erythematous bullous lesions in the whole body. On physical examination, the patient was conscious, cooperative and had arterial blood pressure 160/90 mmHg, pulse 110/min, body temperature 37.4 °C. Erythematous lesions in the oral mucosa were present on the skin examination, and there were diffuse painful hyperemic rashes, and bullous lesions, especially in the hip region in all the body except the head and neck region. Erythematous lesions and epidermolysis affected an area larger than 40% of the body surface. In the laboratory examination, CRP was high and there was leukocytosis and the other parameters were in the normal range. Dermatology performed frozen examination to the patient. Full-thickness necrosis was seen in the patient and the patient was diagnosed with TEN and hospitalized in the internal intensive care unit. Skin lesions were sterile and they were cleaned daily with isotonic NaCl solution. Distorted skin areas were debrided and followed by waxy sterile closed dressing.

**Conclusion:** TEN is a very severe drug reaction. A history of medication can be detected in almost 90% of patients. Major antibiotics such as sulfonamides, aminopenicillins, cephalosporins and quinolones pose a risk. There is no specific laboratory finding specific to the disease. The suspected drug withdrawal and supportive treatment is the first step in TEN treatment. It has been demonstrated that withdrawal of the suspected drug reduces mortality significantly.

Supportive treatment is similar to treatment applied in severe thermal burns and includes fluid replacement, adequate nutritional support, wound care, and protection from infections. Daily wound care, hydration and nutritional support are essential, and follow-up of serious cases in the intensive care unit is recommended. We believe that the experience we have in burn centers in wound care of patients is beneficial.

**Keywords:** Toxic epidermal necrolysis, wound care, drug reaction

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## PP-0972 [Wound, Wound Care and Burn]

# Assessment of Pressure Ulcers in Patients in the Palliative Care Unit and Treatment Options

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**Objective:** Pressure ulcers occur as a result of damage to the skin and subcutaneous tissue by pressure, friction or shear force. Blood circulation decreases with the pressure to the tissue between the surface and the bone and pressure ulcers develop in patients who remain in the same position for a long time. Apart from this, immobility, mental status change, malnutrition also have an important place in ulcer development. Most pressure ulcers are preventable wounds. The study was conducted to evaluate pressure ulcers and treatment options in patients treated in palliative care unit.

**Material and Methods:** The data of patients treated for pressure ulcer in the palliative care unit of Ahi Evran University Education and Research Hospital between October 2016 and November 2017 were evaluated retrospectively. data were collected from specially filled forms for every patient. The stage of pressure was determined according to National Pressure Ulcer Advisory Panel classification.

**Results:** Forty eight patients were treated for pressure ulcer during the period of treatment in the palliative care unit according to the results of the retrospective evaluation. Pressure ulcers were most common in the sacral region (18 patients, 37.5%), ischial tuberosity (12 patients, 25%), trochanters (9 patients, 18.7%), malleolars (3 patients, 6.2%) and soles (6 patients, 12.5%). 12,5% of the patients were stage I, 62.5% of stage II, 14.5% of stage III, 6.2% of stage IV and 3.7% of suspected deep tissue damage. Stage I disease was treated only with dressing and wound care. All other patients underwent surgical debridement. While epidermal growth factor (EGF) was applied in 2 patients in stage III and type-I collagen including particles was applied in 4 patients, negative pressure vacuum system was applied to all other patients, depending on the formation of granulation tissue.

**Conclusion:** The most common sites of pressure ulcers are the sacrococcygeal region, trochanters and heel regions. Treatment of pressure ulcers should be done by a team that can prevent ulcer development and treat developed ulcers. The most effective and easiest way of treating pressure ulcers is protection. Apart from these, many medical and surgical treatment options are available. These treatments may have advantages over each other at the cost and benefit point. The main purpose of the treatment is to increase infection management and wound healing.

**Keywords:** Pressure ulcer, wound care, palliative

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## PP-0973 [Wound, Wound Care and Burn]

# Hypertrichosis Forming as a Result of Intralesional Steroid Injection in Burn Induced Hypertrophic Scar Tissue

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Hypertrophic scar is a fluffy wound healing causing severe itchiness, pain and cosmetic problems in burn patients. Steroidal pomades, intralesional steroid injections, silicone compression garments, silicone gel and radiotherapy are used in the treatment. Itchiness due to hypertrophic scar especially in the pediatric age group, often does not respond to locally steroidal pomades, preventing the child from maintaining normal life and increasing mobility in the joint regions. Steroids can cause systemic effects, even though they are mostly used locally in dermatological diseases such as burns. We will try to describe the systemic side effect that developed in a child with intralesional steroid injection due to hypertrophic scar in this case. A 5-year-old girl



admitted to our outpatient clinic with complaints of blistering, swelling and severe itching due to hot water burning of the right knee 6 months ago. Physical examination revealed a 15x20 cm hypertrophic scar tissue in the right knee. Triamcinolone acetone 40 mg ampoule was applied intralesionally in the patient whose complaints did not regress with local pomade treatment by plastic surgeon. In the follow-up after 1 month, it was observed that the patient's itching passed but hypertrichosis developed in face, neck, back and chest. Therefore steroid treatment was discontinued. The areas with increased hair growth were seen to get normal after 3 months. Even though, intralesional steroid is quite effective in itching and blistering due to hypertrophic scar, it can cause systemic side effects and can even lead to cushing syndrome. Therefore, it should be kept in mind that severe systemic side effects may occur in patients treated with local steroid therapy, and patients should be closely monitored.

**Keywords:** Burn, hypertrophic scar, intralesional steroid, hypertrichosis

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## PP-0974 [Wound, Wound Care and Burn]

# Death Pits in Our Region: An Overview of Floor Furnace Burns

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Burn causes; boiling, flame (floor furnace), chemical, electrical and radiation exposure. Floor furnace is a special kiln used for baking bread with firewood in the eastern and southeastern Anatolia region. Floor furnace burns are traumas that are characterized by causing deep and large burns, which are related mostly with women and young children falling into them. Floor furnace burns have high morbidity and mortality. Floor furnace burns, as in other burns, are inversely proportional to the socio-economic and socio-cultural levels of the patients. The reason for the more common floor furnace burns in our region is that the families in the Eastern Anatolia region have a crowded population, the floor furnace are made by excavating the floor and covered with cardboard or simple sheet metal. While women usually cook bread, children are exposed to temperatures of about 450 degrees Celsius, which is the result of falling on the floor furnaces that are left to cool. Severe burns form as a result of high temperature for a long time in patients who often have difficulty saving themselves. It is seen in the literature that all studies related to floor furnace burns are conducted in the Eastern and Southeastern Anatolia region. In these studies conducted, the ratio of floor furnace burns to other burns varies between 2.1% and 9.9%. They are mostly confronted in children and women. Floor furnace burns are around 70% in children aged 0-6 years. In different studies the average age was found between 10.7 and 17. In all studies, it has been stated that it is more frequent in female population than males (61.5%-71%). It is observed that the total burned surface area and the depth of burn in floor furnace burns are higher than those in other burns. When hospital stays are compared, it is seen that the duration of hospitalization of the patients with floor furnace burns is significantly longer. Surgical interventions such as debridement, escharotomy and fasciotomy, autograft, reconstruction and amputations applied to the disease are also more common in floor furnace burns. We reviewed the in-patients who were treated between June 2016 and June 2017 in our clinic. The number of in-patients treated in one year was 635. Distribution of our patients according to etiology were as such; burning burns 495 (78%), flame-burns 109 (17%), electric shock 24 (0.03%), chemical and other burns 7 (0.01%). There were 93 (14.6%) adult patients and the number of pediatric patients was 542 (85.4%). Number of female patients was 295 (46%) and male patient was 340 (54%). The mean age of our patients was 8.7. The average duration of hospitalization for flame (floor furnace) burns was 9 days, and burning burns were 6.9 days. A total of 193 (1.77 per person) surgical procedures were performed in 109 patients with flame burn and 289 (0.58 per person) procedures were applied to 495 patients with boiling burn. Three patients with floor furnace burn had to undergo amputation and fasciotomy. Hyperbaric oxygen therapy to all of our patients admitted due to floor furnace burn was applied (2.0-2.5 ATA, 120 min per day, 100% oxygen for 15 days).

**Keywords:** Pediatric burns, East Anatolia region, floor furnace burns

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## PP-0975 [Wound, Wound Care and Burn]

# Our Necrotizing Fasciitis Cases Developing Associated with Perianal Abscess

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**Introduction:** The treatment of anal abscess which is one of the frequently encountered problems of the perianal region, is usually simple drainage. Drainage is usually adequate in patients admitting in the early stage and having been established early diagnosis. However, when patients admit late to the hospital, the clinic may progress very rapidly, so fournier gangrene and necrotizing fasciitis can develop within days. This process can develop even more rapidly especially in immunosuppressed patients

or those with co-morbidities such as diabetes, which disrupt wound development. We aimed to describe the clinical course and treatment of our 3 patients who developed necrotizing fasciitis due to anal abscess in our clinic.

**Case:** Necrotizing fasciitis was diagnosed in patients who complained of pain in the breech region and who did not take this seriously at the beginning and later admitted to the hospital. One of the patients was found to have irregular diabetes mellitus. The other patient was found to be HIV-positive detected when the other patient admitted to the necrotizing fasciitis clinic. The patients were taken urgently to the operation and all of the necrotic tissues were debrided. Closed Patients' open wounds were covered with specially prepared pads and wrapped. At this stage, appropriate infection antibiotherapy was applied by consulting to the infectious diseases in order to fight infection effectively. In addition, vital signs and laboratory values were closely monitored to ensure that fluid losses were not missed. After the infection was completely reversed, the patient was transferred to the plastic surgery department for proper tissue grafting.

**Conclusion:** Early diagnosis and treatment of necrotizing fasciitis with high mortality and morbidity are life-saving. It should be taken into consideration that it is also difficult to treat patients with co-morbid diseases, which will accelerate progression in particular. It is of vital importance that necrotic tissue is removed surgically at once and to prevent sepsis development by controlling infection. In patients with severe debridement, fighting against infection becomes more difficult as the skin barrier is removed, and fluid losses can be at a serious level. For this reason, we think that it is very important that the patients are followed-up in experienced and equipment-advanced clinics in a comprehensive care.

**Keywords:** Anal abscess, fournier gangrene, necrotizing fasciitis

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## PP-0976 [Wound, Wound Care and Burn]

# Recombinant Human Epidermal Growth Factor Use for Wound Site Reconstruction in a Patient with Open Abdomen

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**Introduction:** Open abdomen is accepted to be a situation by the World Society of the Abdominal Compartment Syndrome (WSACS) that the abdomen can not be closed after the abdominal operations and neither the skin nor the fascia of the abdomen can be closed. The mortality level gradually decreased over the years with the help of medical technologies advancing in the open abdomen. Closure of the open abdomen is considered wound healing and growth factors that positively affect the phases of wound healing can accelerate wound healing. In addition to treatment with vacuum assisted wound closure (VAC), we aimed to present our patient with an open abdomen in whom we performed dermis recombinant human epidermal growth factor (EGF).

**Case:** A 78-year-old male patient was evaluated at the outpatient clinic with the complaints of nausea and vomiting and inability to defecate for 5 days. She had an abdominal operation on his history 30 years ago. He had diabetes and chronic obstructive pulmonary disease as chronic diseases. On the physical examination, no bowel sounds were observed in the abdominal auscultation. The patient's standing direct abdominal graphy revealed air-fluid level. Computerized tomography revealed dilatation of ileal intestinal segments. Laparotomy was performed after the clinical picture of the patient did not heal and he was hospitalized with ileus diagnosis. Bridectomy + segmental ileum resection + small intestine end-to-end anastomosis was performed. On postoperative 8th day, VAC washing initiated to the patient who was diagnosed with open abdomen after opening the skin and fascial sutures. The open abdomen was in category 3a by WSACS classification. There was no signs of infection, debris or necrosis on the skin. The recombinant human epidermal growth factor gel was applied once a day to the patient's dermis. VAC administration and topical EGF application were performed for about 6 weeks. After these applications, his midline defect was repaired with a skin graft from the left thigh. The patient was discharged on the 6th day of the reoperation with healing.

**Conclusion:** Open abdomen, is a condition treatment and management of which requires attention and information and the mortality levels are still high. The purpose of the Open Abdominal treatment method, which is classified by WSACS, is to close the abdomen, so this phase includes wound healing phases. It has been reported that the epidermal growth factor affecting wound healing phases stimulates epithelization in studies performed, has a positive effect on dermis formation in the early stages of wound healing, and stimulates healing of chronic wounds. In our case, in addition to VAC administration, we used a gel containing recombinant human epidermal growth factor applied once daily. No reaction or side effects were observed in the dermis regions in our patient. Drugs containing EGF are mostly used in the treatment of diabetic foot, and the experience of using it in open abdomen is very low. We are convinced that the recombinant human growth factor can be used in the treatment of open abdomen.

**Keywords:** Open abdomen, recombinant human epidermal growth factor, wound healing

## PP-0977 [Wound, Wound Care and Burn]

## A Case of Necrotizing Fasciitis Occurring Secondary to Tooth Abscess

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**Introduction:** Necrotizing fasciitis is a rapidly progressing deep tissue infection involving subcutaneous soft tissue and fascia. Surgical debridement and antibiotic treatment to be performed early can reduce mortality. We will have a case of progressive necrotizing facial necrosis, which starts from the submandibular area of the right second molar secondary to odontogenic infection and leading the involvement of neck, thoracic cortex anterior wall and bilateral breast tissue which is caused by tooth abscess having external orifice in the right mandibular inferior. The necessity of performing early and serial surgical debridement will be emphasized.

**Case:** A 49-year-old patient who had no self-care, was in depressive episode, who did not report any additional disease other than bipolar disorder, did not regularly use oral antibiotics started 15 days ago due to dental abscess, and admitted to the emergency service at Ege University Faculty of Medicine with a complaint of malodorous wound on the right submandibular region and on the front side of abscess and thorax starting 10 days ago. He had no history of trauma, insect bite and any intervention. Physical examination revealed necrotizing, bullous lesions, crepitations and anesthesia starting from the submental area and spreading around the anterior chest wall and left breast areola. Computed tomography revealed an image consistent with necrotizing fasciitis that started from the anterior cervical area and descended to the anterior chest wall. Deep neck structures had no appearance of inflammation/abscess or mediastinitis. In the laboratory tests, blood glucose: 571 pH: 7,1, lactate 2.5, crp: 30 wbc: 26,000, neutrophil 92%, other examinations were normal and the patient had a newly detected diabetes mellitus and a diabetic ketoacidosis picture. Debridement including skin and subcutaneous tissues was applied up to submental area, anterior cervical region, bilateral clavicle and upper and inner quadrants of the left breast. Platisma, pleura and pericardium were intact. Specimens were sent to culture and pathology. In consultation with infectious diseases, meropenem+teicoplanin were initiated. Blood glucose of the patient was regulated by insulin therapy and his vital signs had a stable course. The surgical debridement and negative pressure wound care systems were applied regularly at 3 days intervals. In the first tissue culture, candida albicans and staphylococcus epidermidis reproduced and fluconazole was added to the antibiotherapy of the patient. A new culture sample was taken in every debridement and acinetobacter baumannii reproduction took place in the control culture of the patient. Previous 3 drugs were discontinued with antibiotherapy revision and tigecycline+colistin antibiotherapy was applied. There was no reproduction in the culture sample of the 14th day. Debridement was performed 8 times from the first debridement to the last debridement in the photographs. There was progression in the wound boundaries in the first 4 debridements. In the last 4 debridements, the borders were stable and significant blood build up and granulation tissues were formed. Afterwards the wound was reconstructed by plastic and reconstructive surgical team with a partial thickness skin graft (STSG) taken from the lower extremity. The patient was discharged with recovery.

**Conclusion:** Early diagnosis of necrotizing fasciitis is life-saving. Early debridement should be performed when NF is suspected. Since the mortality and morbidity are high, the disease should be treated with high clinical suspicion and surgical intervention should be used for diagnosis if necessary. Reconstruction should be planned after the infection picture and necrotic spread have been controlled.

**Keywords:** Necrotizing fasciitis, dental abscess, surgical debridement, reconstruction

## PP-0978 [Wound, Wound Care and Burn]

## Recombinant Human Epidermal Growth Factor Use for Wound Site Reconstruction in a Patient with Decubitus Ulcer

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**Introduction:** Decubitus ulcer is commonly called pressure sore or bed sore and is an extreme and long-lasting pressure on the skin. It is the pressure, friction, irritation and ulcerations in the tissues that extend to the skin, under the skin and bones. Since ulcer healing involves wound healing phases, growth factors positively influencing these phases can positively contribute to

wound healing. We aimed to present our case with decubitus ulcer in whom we applied recombinant human epidermal growth factor (EGF).

**Case:** A 66-year-old female patient having a history of decubitus ulcer for 5 months had a plegic condition due to cerebrovascular accident 3 years before her history. Hypertension among chronic diseases was present. The patient admitted to general surgery outpatient clinic due to decubitus ulcer. In the physical examination, stage 3 decubitus ulcer with 9x8x2 cm size in the right gluteal region including skin, subcutaneous and muscle fascia having debris on it was present and debridement was performed. Deep tissue culture was obtained, no culture was detected. Wound dressing was performed by applying topical recombinant human epidermal growth factor gel on dermis on the side of ulcer and saline (SF) on the ulcer cavity. The patient was discharged on the second day after debridement. The ulcer size was measured as 6x4x1 cm at the end of the 30th day of the patient who was regularly dressed with gel dressing including SF + EGF.

**Conclusion:** Decubitus ulcer is a health problem that increases the risk of morbidity and mortality, prolongs the length of stay in the hospital, and has high treatment costs. With the advancement of medical technology, many options are added to the treatment of decubitus ulcers, one of which is the growth factors that positively affect wound healing. It has been reported that the epidermal growth factor plays an important role in cell growth, proliferation and differentiation, is involved in the differentiation and regeneration of many tissues including epithelial tissue, and has a positive effect on dermis formation in the early stages of wound healing. EGF-containing gel was applied topically on the dermis twice a day to the patient with decubitus ulcer who had no contraindications for the use of EGF. In our patient, no reaction or side effects were observed in the dermis areas applied with EGF gel. Topical-local drugs containing EGF are mostly used in the treatment of diabetic foot, and experience of use in decubitus ulcer is quite low. We believe that the recombinant human growth factor in decubitus ulcer treatment may be among the treatment options.

**Keywords:** Decubitus ulcer, recombinant human epidermal growth factor, wound healing

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## PP-0979 [Wound, Wound Care and Burn]

# Evaluation of Intralesional Epidermal Growth Factor Applications in Diabetic Foot Wounds

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**Objective:** Diabetic foot injuries are one of the most common complications of diabetes and are an important causes of morbidity and mortality in patients. Traditional wound care treatments such as debridement, revascularization, antibiotic treatment in the case of infection are not sufficient in the treatment of some patients. Supportive care is needed. We evaluated one of the supportive treatments we performed in our clinic.

**Material and Methods:** We aimed to present intralesional rhEGF experience in 8 diabetic foot ulcers classified as Wagner III and IV in our clinic. The epidermal growth factor (Heberprot-P) was produced by researchers at the Genetic Engineering and Biotechnology Center (CIGB, Havana-Cuba) in the mid-1990s. Today, EGF is increasingly used in diabetic foot treatment with topical and intralesional forms. It has been shown that it accelerates healing in non healing diabetic foot ulcers and shrinks ulcer area.

Wound healing is a complex process involving many cells. During these activities, growth factors play an important role in providing and directing cell migration, their division, differentiation, and the progress of protein production. Epidermal growth factor (EGF) among a number of growth factors. The use of recombinant form of hEGF as an intralesional infusion in diabetic foot ulcers increases efficacy by escaping protease activity, especially in severe injuries. This is effective both in the formation of the granulation and in the complete closure of the wound.

**Results:** In many clinical trials, it has been successfully used in low-to-moderate chronic and long-lasting unhealed diabetic ulcers. Good results have been obtained in the use of HREGF in patients with or controlled infection in whom other alternative therapies have been tried but have not recovered for a long time. The most common side effects are allergic reactions, hypotension, tremor and nausea. In our cases, only one case of nausea and tremor developed at the beginning of treatment. EGF has been shown to reduce the risk of recurrent lesions at the site of ulcer healing, hospitalization duration and amputation rates.

**Conclusion:** Treatment of rhEGF in 6 of 8 non-recovering diabetic foot ulcers provided complete healing. rhEGF should be used when needed in diabetic foot treatment.

**Keywords:** Diabetes, diabetic foot, intralesional epidermal growth factor

## PP-0980 [Wound, wound care and burn]

## Use of Hyperbaric Oxygen Therapy in Thermal Burns: Clinical Evaluation

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**Objective:** Burns are health problems with a high morbidity rate. For this reason, treatments that can support burn treatment are very important. In this study, results obtained with Hyperbaric O<sub>2</sub> treatment were evaluated in 2nd and 3rd degree burns.

**Material and Methods:** Second and 3rd degree thermal burn patients who were treated in Akyurt State Hospital, General Surgery Clinic and Outpatient Clinic between 2016-2018 were included in the study. A total of 1180 patients were treated. Hyperbaric O<sub>2</sub> therapy could be given to 261 patients. HBO (hyperbaric oxygen) therapy has been a supportive burn treatment method applied in the recent years with various indications. The problems encountered in burn healing are susceptibility to infection, long treatment duration, wide scar and high morbidity rate. Protecting the viability of tissues necessitates a special care in the direction of maintaining microvascular circulation and reducing the duration of wound healing by increasing body resistance. Hyperbaric O<sub>2</sub> treatment also meets the needs of burn treatment with positive effects of tissue oxygenation, wound healing and response to infection. Numune Hospital Hyperbaric treatment unit which is one of the few hyperbaric centers of our country is located in the same campus as Akyurt State Hospital. We have added this center, which is a great chance for our patients, to the treatment plan of our patients who have indications to accelerate their treatment and achieve better results.

**Results:** Patients who are able to receive hyperbaric oxygen therapy have a shorter healing period and less scar.

**Conclusion:** Hyperbaric O<sub>2</sub> therapy can be added to support burn treatment in centers where patients can reach easily.

**Keywords:** Burn, hyperbaric O<sub>2</sub> treatment

## PP-0981 [Wound, wound care and burn]

## Burn and Amputation

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**Objective:** Burn, which can sometimes be fatal, is a traumatic trauma in terms of experienced staff for its follow-up and treatment in the health society, cost and proper location. There is a risk of limb loss, i.e. amputation, in all kinds of burns, especially in electrical burns. I intended to share our burn experiences which resulted in amputation after burn in the last years.

**Material and Methods:** Patients who were hospitalized in the burn and intensive care unit were scanned over information processing system between January 2016 and December 2017. Data were analyzed retrospectively in terms of age, gender, cause, percentage and depth of burn, and the limb amputated.

**Results:** Of the 253 patients who were followed-up and treated between January 2016 and December 2016 in our burn center, 107 were treated in the intensive care unit. In spite of all the efforts, 22 patients were mortal and 12 patients were amputated. The male to female ratio of the patients was 11/1. Their age ranged from 22 to 67, the mean age was 40.5 di. Burn percentages ranged from 5% to 60%. During the follow-ups, only one patient was mortal, while the others were discharged with healing. While the cause of burn in 6 of the patients was electricity, 4 had flame, and 2 had hot water burn.

**Conclusion:** Organ losses due to amputation are important socioeconomic problems. Significant precautions should be taken for these losses as a result of burn. Electricity burns associated with work accidents especially in young men at the working age are remarkable in our study. Home accidents have the first place in the other age groups. Clinicians dealing with burns should evaluate possible amputation risk when they first meet the patient. They should not avoid to use precautionary fasciotomies using interventional imaging if necessary in circular extremity burns and electrical burns. Despite everything, amputation decision on the spot and on time is of both vital and socioeconomic importance. The necessary cardiovascular surgery, orthopedic consultations and patient consents are necessary.

**Keywords:** Flame, amputation, electric, burn

## PP-0983 [Wound, wound care and burn]

# Struggling with Sepsis in Burns

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**Objective:** The number of deaths caused by burns is very high. Efforts are being made to reduce this mortality rate with nutrition and fluid replacement, wound care, and new developments in infection control. We aimed to present the infections developed and their outcomes in the patients whose follow-ups and treatments were carried out in our Burn Center.

**Material and Methods:** Patients who were treated in our burn center of the Health Sciences University İstanbul Bağcılar Training and Research Hospital during 2016-2017 were retrospectively analyzed in terms of burn scales, sepsis developed, intensive care need, sepsis factors and related mortality and morbidity.

**Results:** There were 233 patients in our burn center who were interned to the intensive care and intensive care unit, and 107 of them were hospitalized directly in the intensive care unit. The mean age was 38.6 years and the male to female ratio was 60/173. While the mean duration of hospitalization was 12.9 days, it was observed that this duration extended in intensive care hospitalizations. All of the 122 patients having a mortal course died in intensive care units. Sepsis factors were isolated in 14 of 22 mortal patients. Acinetobacter, Candida, Klebsiella, Pseudomonas and Serratia were isolated as 6, 2, 1, 4, and 1 respectively. Although these antibiotics have been given for these factors, these patients with extensive burns have died of severe sepsis. The factors could not be isolated and the remaining patients had mortal courses due to organ insufficiencies attached to co-morbidities, and especially lung problems.

**Conclusion:** As seen in our study, the mortality rate associated with complicated burns accompanying sepsis in the patients followed up in our burn intensive care unit is still high with 20.5%. Pre-sepsis is a critical period for burn patients. For this reason, it is important that wound care and infection control of burn patients who are open to infection are done carefully and in a controlled manner. Detection of sepsis factors and the use of specific antibiotics should be done timely and appropriately by burn clinicians.

**Keywords:** Infection, sepsis, burn

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## PP-0984 [Wound, wound care and burn]

# Effect of Intraperitoneal N-Acetylcysteine and Ozone Treatment on Stasis Zone Necrosis

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The stasis zone is a critical area surrounding the coagulation field and determining the depth and width of necrosis in burns. Several agents have been suggested in the literature to protect the stasis zone. The positive effects of n-acetylcysteine on hepatocytes, nephrotoxicity and multiple organ failure in human have been demonstrated. In this study, the effectiveness of n-acetylcysteine and ozone in protecting stasis zone was investigated. Intraperitoneal application activities of n-acetylcysteine and ozone were compared in the komp model. Additionally serum samples were taken and malondialdehyde levels were measured in these samples in order to measure the antioxidant properties of n-acetylcysteine and ozone. As a result, in our study the possible effectiveness of n-acetylcysteine and ozone in protecting stasis zone has been displayed and it has also been demonstrated that ozone may be more beneficial than n-acetylcysteine.

**Keywords:** Stasis zone, oxidative stress, burn

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## PP-0985 [Wound, wound care and burn]

# The Performance of Our Wound Care Clinic Which has Turned its First Year and the Selected Cases

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The impairment of the integrity and functioning of the normal anatomical structure is called 'wound'.

The wound is a condition inherent in the surgical branches that every surgeon must know and treat, but it is not liked by surgeons because of clinical conditions, material concerns and legal problems. It is not desirable to deal with these patients and if they are encountered, salvation remedies are sought. The wound care clinic, located in the Department of General Surgery in Düzce University School of Medicine, which is located in the middle of two large cities but is close to the industrial region and together with neighboring cities having large populations, has a large chronic and difficult wound potential has turned its first year. In this presentation, we wanted to state the diversity and numbers of the patients followed up in our clinic for one year and to explain the difficulties in their follow-up and treatments.

A total of 61 chronic and difficult wound care patients were followed during one year. Patient distribution is as follows:

- 5 Fournier gangrene
- 4 Necrotizing facade
- 20 compression wounds
- 19 open abdomen (1 enteroatmospheric fistula)
- 6 diabetic foot
- 7 patients were accepted from the external center

One patient who was referred to us from the external center because of complications in the postoperative period was exitus due to additional internal problems. The average length of hospitalization for wound care patients is 23.2 days. The main difficulties encountered are the impatience and psychological fluctuations of patients and their relatives, the difficulty to use and supply materials, the inadequacy of education about preventive factors, the demand for high invoices, and the excuses of plastic surgeons to avoid patients.

**Keywords:** Chronic and difficult wound, wound care clinic, decubitus scar, diabetic foot

## PP-0986 [Wound, wound care and burn]

# Cases for Whom Surgical Treatment is Applied due to Fournier's Gangrene

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**Objective:** Fournier's gangrene is an important concern because it requires rapid and effective management in general surgery clinic practice and delay in treatment leads to mortality and morbidity. Our aim in this study is to present the results of the cases in which we performed surgical treatment for Fournier gangrene and to discuss the benefits of current practice.

**Material and Methods:** For this purpose, data of patients who underwent surgical treatment with Fournier diagnosis between January 2014 and December 2017 were retrospectively scanned. Demographic characteristics of the patients, laboratory data at the moment of diagnosis, surgical technique, wound care method applied, body mass index, comorbid diseases, tissue culture results, hospitalization duration, hospitalization duration in intensive care and Uludağ Fournier Gangrene Severity Index score were recorded.

**Results:** During this period, 28 cases were treated with the diagnosis of Fournier gangrene in our clinic. The mean age of the patients was  $51.3 \pm 18.1$  and the f/m ratio was 9/19. Mean UFGSI was  $6.71 \pm 3.25$ , mean hospital stay was  $30.2 \pm 26.8$ , and intensive care hospitalization rate was 21.4% (n=6). 46,4% of the patients had perineal and pelvic disease, 25% were perineal and 28,6% had perineal and pelvic extension. There was no correlation between the localization of the disease and the duration of hospitalization and the duration of intensive care hospitalization. The mean number of debridement was  $5.1 \pm 3.3$  and the number of vacuum dressings was  $4 \pm 3.5$ . There was a statistically significant positive correlation between UFGSI score and hospital stay, intensive care hospitalization duration, number of vacuum dressings and CRP values. A stoma for diversity was opened for 39% of the cases. Only 1 case (1.3%) developed mortality. 46% of the patients had DM and 10.7% had cardiac disease. E. coli was detected in 42.9% of the cases, enterococci in 14.3% and multiple pathogens in 10.7%.

**Conclusion:** Fournier's gangrene management is a disease which is difficult to manage, requires repetitive debridement, and has a course of mortality if effective treatment cannot be provided. Proactive approach to treatment planning is crucial. Wide and effective debridements and negative pressure dressing systems are highly effective in treatment.

**Keywords:** Fournier gangrene, negative pressure wound closure, necrotizing fasciitis, Uludağ Fournier Gangrene severity index

## PP-0987 [Wound, wound care and burn]

# Our Approaches to Necrotizing Fasciitis Treatment

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**Objective:** Necrotizing fasciitis is a fearful dream of many surgeons because of its high mortality and morbidity. Since chronic diseases are present in all patients, they can be treated with multidisciplinary approaches by cheap methods without developing complications.

**Material and Methods:** Twenty-five patients with necrotizing fascias between 2015 and 2017 were included in the study. All of the patients had diabetes mellitus. In addition, 6 patients had dialysis and 12 patients had hypertension. Necrosectomy was performed 13 times (10-20) on average with intervals of 2-3 days. No vac was used in any patient. It was thoroughly irrigated after necrosectomy with saline and chlorhexidine. The wound was covered with a mesh of Centella asiatica, zinc oxide, ceftriaxone and nitrofurazone.

**Results:** We saw that necrosis areas increased every day and frequent debridement was necessary in patients in whom we had difficulty in taking control of the comorbid diseases of patients. Debridement was performed at least every 2 days, and at most once in every 4 days. The length of stay at the hospital was directly proportional to the control of the comorbid disease. At least 3 debridements were performed after removal from necroses. Patients were followed for at least fifteen days without any intervention to the wound after all the necrosectomies had been completed for grafting. If there is no complication, grafting is done.

**Conclusion:** We have seen the treatment with very cheap methods. In these patients with very high mortality and morbidity. The duration of healing is inversely proportional to the control of the comorbid disease.

**Keywords:** Chronic diseases, necrotizing fasciitis, necrosectomy

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## PP-0988 [Wound, Wound Care and Burn]

# Our Experience of Ultrasonic Surgical Debridement in Diabetic Foot Ulcer

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**Objective:** Infection and/or debridement due to necrosis in diabetic foot ulcers is an invariant part of treatment. Apart from sharp debridement, alternative debridement methods are also available. One of these is ultrasound surgical debridement. In this study, we aimed to share the results of patients with diabetic foot ulcer who underwent ultrasonic surgical debridement.

**Material and Methods:** Twenty patients classified as Wagner 4 who underwent ultrasonographic surgical debridement in our chronic wound unit between September 2017 and January 2018, were included in our study. Demographic information of the patients, Wagner classifications, planned surgical procedures, additional medical treatments, numbers of surgical and ultrasonic debridement, post-debridement complications, graft outcomes and whether they resulted in amputation or not were evaluated and recorded.

**Results:** Of the 20 patients included in the study, 15 (75%) were male and 5 (25%) were female. The mean age of the patients was 60.85. While at least 1, maximum 3 sessions of ultrasonical surgical debridement were applied to patients who had tunneling diabetic wound or to be grafted, and at least 1 and maximum 12 sessions of standard surgical debridement were performed. As additional treatment, 5 patients received intralesional EGF and 4 patients received hyperbaric oxygen therapy. While none of the 10 patients who were planned to undergo knee amputation and were referred to our clinic underwent the planned large joint amputation in the beginning, it was seen that only one patient underwent preoperative foot amputation. There was no improvement in the Wagner classification after treatment in any patient. Hemorrhage occurred in one patient after debridement, and bleeding control was provided by appropriate intervention. While it was seen that graft application having autologous partial thickness was performed by providing granulation in 7 patients, graft was successful in 5 patients, graft rejection was observed in 2 cases. With the treatments applied; it was observed that the planned operation size decreased.

**Conclusion:** Ultrasonic surgical debridement can be successfully applied to selected patients having diabetic foot ulcers in order to prevent damage to living tissues and to control infection, and to provide safe surgical debridement in tunneling tissues and



not damage granulation tissue before grafting. When combined with additional treatments, it may also have a role in reducing the planned operation size.

**Keywords:** Diabetic foot, ultrasound debridement, graft, amputation

## PP-0989 [Wound, Wound Care and Burn]

# Relationship Between Diabetic Foot Wound and HgA1c

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**Objective:** Diabetes is one of the leading causes of death in many countries around the world and is also the most common cause of non-traumatic amputations. According to the data of 2003, there are 194 million diabetic patients in the world. Diabetic foot wound is one of the most common complications of lower extremity due to diabetic neuropathy. Lower extremity ulcers develop approximately in 15% of diabetic patients in one stage of their lives. We aimed to compare the relationship between HgA1c value in patients with uncontrolled diabetes mellitus and who developed diabetic scarring and duration of recovery of diabetic mellitus and amputation.

**Material and Methods:** We retrospectively reviewed patients with diabetic foot who were hospitalized and treated at Selçuk University School of Medicine General Surgery Department between January 2016 and January 2018.

**Results:** A total of 27 patients were admitted to the hospital with diabetic foot disease and were hospitalized. The mean age of the patients was 60. Of these, 24 patients were male and 3 of them were female. According to the Wagner classification, 12 patients were in stage 4. The mean HgA1c and WBC values of the patients with diabetic foot at the moment of their admission were found to be 11.25% (4-6), and 8.8 (3.5-10.5) respectively. It was determined that 20 years passed after the patients had been first diagnosed with diabetes. At the time of diagnosis, 6 of our patients had osteomyelitis. Five of them had minor surgical amputations and 1 of them had antibiotherapy response. As a co-morbid disease, 9 had hypertension and 1 had COPD. 9 patients were active cigarette smokers. The wound size before the start of treatment was measured as 6.2 cm on average. The mean wound healing time was determined to be 63 days (36-102) with the condition of complete wound closure. Fifteen of our patients were identified as Wagner stage 3. The mean HgA1c and WBC values of the patients with diabetic foot at the the time of their admission were 8.3% (N: 4-6) and 9.2 (N: 3,5-10,5) respectively. It was determined that average of 19 years passed after the patients received first diabetes diagnosis. Osteomyelitis was present in 1 patient at the time of diagnosis. None of the patients in this group were amputated, even if they were minor. As comorbid diseases 7 patients had hypertension and 1 patient had COPD. 5 patients were active cigarette users. The wound size before the start of the procedure was measured as 6.1 cm. The wound healing time with the condition of complete wound closure was 42.6 days (28-116).

**Conclusion:** Diabetic foot complications are now more prevalent in the world and in our country due to increased elderly population. It has been reported in the literature that the duration of treatment of the patients with diabetic wound and high HgA1c level is longer than that of the patients with low HgA1c level. It is also stated that the patients having high level of HgA1c have high risk of amputation. In our study, in parallel with the literature the mean HgA1c level of the patients at Wagner stage 4 was high and wound healing duration was higher than the other group. Minor surgical amputations were more common in the group with high HgA1c level compared to the other group. The importance of blood glucose regulation comes in the first place in the fight against diabetic foot wound.

**Keywords:** Diabetic foot, HgA1c, diabetic wound

## PP-0990 [Wound, Wound care and Burn]

# Effect of Natural Collagen Matrix Covering on Wound Healing

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**Objective:** Collagen, which is the basic structure of extracellular matrix, contributes to the development of granulation tissue by the effect on fibroblasts and increases epithelization by stimulating keratinocytes. Our aim in this study is to evaluate the effects of the natural collagen matrix covering on wound healing, which we use to accelerate the healing of the extremity wounds, which we have difficulty in treating.

**Material and Methods:** Natural collagen matrix covering was used for 5 wounds of 4 patients (1 female, 3 males) with occlusive arterial occlusive artery disease and type II diabetes mellitus whose wound did not close although we applied standard wound treatment methods after angioplasty performed to their occluded arteries. Following the mechanical debridement of the necrotic tissues at the wound site and washing of the wound with the isotonic solution, a natural collagen matrix covering, produced from cattle and free of any chemicals, was placed on the wound. When treatment started, there was no reproduction in tissue culture of any wound. The wound dressings were changed every four days and the product was not touched when the dressings were opened. The same product was placed additionally in dressings where the product was not visible.

**Results:** The ages of the patients ranged from 56 to 81 (mean 67) and the duration of follow-up was 28 days. According to Wagner stage, one wound was staged as stage II, two wound stage III and one wound stage IV. No side effects or allergic reactions were noted during the treatment. Complete closure was provided in the wound of the first patient (stage II) having 6x2 cm unclosed wound in the left foot 3-4-5 of finger amputation stump. In the other three patients, on the other hand, the average wound size of 25.5 cm<sup>2</sup> in the amputation stump, sole and amputation stump with the sole decreased by 36% at the end of this short-term treatment and decreased to 16.3 cm<sup>2</sup> with and there was an increase in granulation and epithelization. In the course of treatment, only one patient required systemic antibiotics.

**Conclusion:** Based on our initial results of this treatment, it is understood that natural collagen matrix coverings are more successful than standard treatment in non-healing wounds. In non-healing wounds, the matrix metalloproteinase enzyme causes serious damage to the collagen structures in the tissue. When natural collagen coverings like these are used, it can contribute to wound healing by preventing the damage of the tissue to its collagen since they absorb exudate, and occupy collagen, metalloproteinase and elastase enzymes in the covering. Studies involving larger patient groups will be done to confirm the results of this study.

**Keywords:** Collagen, wound healing, diabetic ulcer, artery disease

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## PP-0991 [Wound, Wound care and Burn]

# Negative Pressure Assisted Open Abdomen Treatment Experience

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**Objective:** Nowadays, with the progress of anesthesia and surgical techniques, there is an increase in planned and unplanned relaparatomies. In the management of this situation, the zipper was used and in the following years bogotto bag was used. Over the last decade, the development of negative pressure wound care systems has pioneered abdominal applications. It was aimed to present the results of the cases for whom Negative Pressure Assisted Open Abdominal Care (NPAOAC) which is used in the recent years for the management of open abdomen.

**Material and Methods:** Fifty patients who received NPAOAC treatment in 2016-2017 were included in the study. Age, sex, co-morbid disease, initial operation, number of interventions, morbidity and mortality development parameters of the patients were evaluated.

**Results:** The mean age of 50 patients in whom NPAOAC was applied was 58.8±13,1 and the mean age of male patients was 56.8 and the mean age of female patients was 61.4. In terms of gender, 29(58%) of the patients were male and 21(42%) were female. The primary surgery was applied for anastomosis dehiscence after previous malignancy in 56% of the patients, after evisceration in 32% of them, secondary to intraabdominal abscess in 8% of them, and for early relaparatomy in 4% of them. The average duration of the change is three days and the average application of procedure in this group of patients is 10%. Mortality developed in two patients.

**Conclusion:** Negative pressure assisted abdominal open abdominal treatment system is an effective method that may require relaparatomy and provide the control of abdominal sepsis. Prospective studies to be done in this regard will open up new developments in this issue.

**Keywords:** Negative pressure, open abdomen, wound care

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## PP-0992 [Wound, Wound Care and Burn]

# Effects of Rifampicin on Wound Healing in Thoracoabdominal Full-thickness Skin Defects

**Banu Karapolat<sup>1</sup>, Sami Karapolat<sup>2</sup>, Alaaddin Buran<sup>2</sup>, Burcu Kemal Okatan<sup>3</sup>, Atila Türkyılmaz<sup>2</sup>, Celal Tekinbaş<sup>2</sup>**<sup>1</sup>Department of General Surgery, Kanuni Training and Research Hospital, Trabzon, Turkey<sup>2</sup>Department of Thoracic Surgery, Karadeniz Technical University School of Medicine, Trabzon, Turkey<sup>3</sup>Department of Pathology, Kanuni Training and Research Hospital, Trabzon, Turkey**Introduction:** The effects of topically applied antibiotics on the wound healing process are one of the interesting aspects of medicine that have been discussed for many years.**Objective:** To investigate the effects of topical application of rifampicin on recovery in full thickness skin defects.**Material and Methods:** Forty-two male adult Sprague Dawley rats were divided into two groups, Group A (control group) (n=21) and group B (rifampicin group) (n=21). Approximately 1 x 1 cm sized circular full-thickness skin defects were formed in the right thoracoabdominal regions of all rats. In Group A, local saline solution was applied on wound once a day, and in Group B, 1 cc of rifampicin was applied topically on wound once a day. Seven rats in both groups, were sacrificed at 3, 7 and 10 days respectively and the defect area was resected together with the surrounding normal tissue. Extracted specimens were examined histopathologically and inflammatory cells were scored in terms of collagen accumulation, formation of granulation tissue, reepithelization and ulcer formation. Results were analyzed statistically and p<0.05 was considered significant.**Results:** Statistically significant differences were found in favor of Group B as a result of comparison of scores between groups in terms of inflammatory cell and ulcer formation. Statistically significant results were obtained in terms of collagen accumulation and granulation tissue formation in both groups, but these results were more significant in Group A. Regarding reepithelization, there was no statistically significant difference between the two groups.**Conclusion:** Topically applied rifampicin in experimental full-thickness skin defects does not show a positive effect on wound healing process.**Keywords:** Wound healing, treatment, antiinfective agents, rifampicin**PP-0993 [Wound, Wound Care and Burn]****2 Years Experience of New Burn Unit****Nurullah Damburacı, Barış Sevinç, Murat Güner, Ömer Karahan***Department of General Surgery, Uşak University School of Medicine, Uşak, Turkey***Objective:** Burn is an important health problem caused by the effect of heat, electricity and chemicals on the epidermis and dermis layers of the skin which are the protective layer of the body, and in some cases, it occurs with the subcutaneous region, muscle and bone system affected by different depth and width. Tens of thousands of people from all ages in our country every year are burned in various forms and apply to health institutions. Most of these burns are healed by having outpatient treatment and more severe patients are treated with a specialized multidisciplinary approach in the burn units and burn centers which are in limited numbers. In this study, we aimed to evaluate our 2 years experience in our burn unit which was established in October 2015 and actively started to accept patients on March 2016.**Material and Methods:** The data of patients who were hospitalized and treated due to burns in our unit between March 2016 and February 2018 were examined through patient file and hospital automation system. Patients' sociodemographic data, burning pattern and percentage and the procedures performed, and judicial records were recorded.**Results:** Hospitalization of a total of 155 burn patients were admitted to our unit. Of these patients, 54.8% (n:85) were male and 45.2% (n:70) were female. The mean age was 42,35±19,1, the burn percentage was 7.73±5.4; with minimum 2% and maximum 35%. Surgical treatment was required in 28.4% (n:44) of these burn patients. Early-stage cesarectomy and grafting were performed for these patients. Fasciotomy was performed in 2 of 5 patients admitted due to electrical burn. The duration of median hospital stay of patients who underwent escharotomy and grafting was 7 (2-21) days. The rate of judicial cases in our province was 29% (n:45) due to industrial development of the province. When the type of burns were examined, it was observed that the most frequent burn type was boiling (hot water and milk) in 67.7% (n:105) of the patients, followed by flame and explosion in 21.9% (n:34) of the patients and electricity burn in 3,2% (n:5) of the patients, contact burn in 3,2% (n:5) of the patients and freezing burns in 0,6% (n:1) of the patients. When type of burns were evaluated, hot water burns were seen more in female patients and flame burns were more in male patients. 77.8% of judicial cases were male patients and 22.2% of them were female patients and this difference was statistically significant (p:0.001). Four patients having burn percentage of 20% and over were referred to an advanced burn center, 2 elderly patients was exitus after surgical treatment due to their comorbid diseases.**Conclusion:** Since the establishment of our unit, it has been accepting burn patients in coordination with 112 service. Burn patients having burn percentage over 20% are admitted to our unit having health care workers who have completed the necessary training in our unit according to the Ministry of Health legislation. Treatment of higher burns is also performed in our unit

if necessary. When the number of patients who had inpatient and outpatient treatment in such a short time was taken into consideration, it was determined that early escharotomy and grafting increased the success rate in the treatment of burns and shortened the hospitalization period. Burning units seem to meet the high necessity especially in industrial cities like ours.

**Keywords:** Emergent, burn, surgery

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## PP-0994 [Wound, Wound Care and Burn]

# Wound Management in Enteroatmospheric Fistula: Case Presentation

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Enteroatmospheric fistula (EAF) can be seen as a wound complication in 25% of patients with open abdomen applied for various reasons. It is not a true fistula because it is not covered with tissue on the fistula and there is no fistula tract. It has a very high mortality (42%-75%). The development of EAF often occurs in association with fluid electrolyte disturbance, nutritional deficiencies, and life-threatening sepsis.

In this study, we aimed to share our experiences in the context of the current literature on the subject by presenting a patient operated due to colon cancer and in whom open abdomen and associated enteroatrophic fistula developed after anastomotic leakage.

**Keywords:** Open abdomen, enteroatmospheric fistula, anastomotic leakage, stoma.

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## PP-0995 [Wound, Wound care and Burn]

# Evaluation of Last 5-Year Mortality in an Experienced Burn Center

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**Objective:** Even though early excision and grafting procedures are generally accepted procedures with better understanding of burn pathophysiology and they are reported to decrease mortality, mortality in major burns is still a severe health problem. In this study the patients who had a mortal progress in the last 5 year among those who received inpatient treatment in the burn treatment center of our hospital were evaluated with regard to burn demographics and etiologies.

**Material and Methods:** The patients with a mortal progress in the burn unit between 2013 and 2017 were evaluated retrospectively.

**Results:** The mean age of a total of 80 patients were 49,96/year and total burned body surface area (TBSA) was 55,11%. Twenty seven (33,8%) of the patients were female and their TBSA was found as 46,52%. The mortalities of the 5 year was found beginning from 2013 as 16 (2,9%), 20(2,9%),12(2,1%), 18(4,1%) and 14(4,5%) respectively. A total of 64 patients were lost due to flame burn and it was the most common cause of death in all the years. TBSA in flame burns was 57,53% and it was not found different from burns except flame burns. Thirty seven (58,2%) inhalation injuries coexisted with flame burns. The TBSA percentage of the patients who were transferred to the clinic was found to be 59,17%, and they were found at the 2.39th day of the burn injury. Mean hospitalization duration of the transferred patients to the unit was shorter (10,76 days). The most commonly reproducing organisms were *Pseudomonas Aeruginosa* in the blood and *Candida Albicans* in the urine.

**Conclusion:** Flame burns are still causes of more common mortality. The patients' applying our unit, as a reference center, in the late period, having their acute shock period in other centers and most of the patients' having received antibiotics show that the initial resuscitation is not sufficient and that the patients were sent having been colonized. The transferred patients' having larger surface area is an expected result.

**Keywords:** Mortality, transfer, burn

## PP-0996 [Wound, wound care and Burn]

## Evaluation of Patients Over the Age of 65 who are Followed in Our Burn Unit

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**Objective:** In this study it was aimed to evaluate general characteristics and treatment results of the patients at the age of 65 and over, who were hospitalized and treated in our burn unit since its establishment.

**Material and Methods:** The patients at the age of 65 and over who were hospitalized and treated in our burn unit between 2009 and 2017 were found from the database retrospectively. The number of hospitalized patients by years, the patients' gender, age, burn percentage, causes of burn, hospitalizing days and mortality results were evaluated.

**Results:** A total of 1808 patients were hospitalized and treated from 2009 when our burn unit was established till the end of December in 2017. Of these patients, 134 (7,4%) were at the age of 65 and over. Sixty three of the patients were male and 71 of them were female. Mean age was 76,08 (65-91). Of these patients, 92 (68,6%) were within the range of 65-79 and 42 (31,4%) of them were at the age of 80 and over. Mean hospitalization duration was 20,3 (1-105) days. While 8 of the patients were hospitalized again after being discharged from the hospital, all of the other patients were hospitalized once. When their burn etiologies are considered, it was seen that 69 of them had flame burn, 51 of them had hot water burn, 8 patients had electricity burn and the remaining 6 patients had chemical burn and other burns such as contact burn. Forty one (30,5%) of the patients had third degree burn. None of the patients had 4th degree burn. Mean burn percentage was detected as 22,5% (0-95). Thirteen of the patients had 41% and over, 16 of them had between 31-40 and 18 had a burn area of 21-30%. The mean burn area in the patients developing mortality was 41,3%. While general mortality rate was 3,8% with 70 patients for 1808 patients hospitalized in the burn unit, the said rate was 26,8% with 36 patients in the age group of 65 and over. While mortality rate was 21,7% with 20 patients in the age group of 65-79, it was detected as 38% with 16 patients in the age group of 80 and over. Thirty of the 36 patients developing mortality had flame burn, 3 of them had hot water burn and 3 of them had other kinds of burns. Thirty of the 36 patients developing mortality had third degree and 6 of them had second degree burns. While mortality rate in the patients hospitalized with burn percentage of 41% and over was 92,3% (12 mortalities/13 patients), this rate was 62% in the patients having burn percentage of 31-40. 61% of the mortality in a total of 36 patients occurred in burn percentage of 31% and over.

**Conclusion:** Burn patients of geriatric age group is a specific patient group and probability of occurrence of complications is higher. When mortality rates are considered, it is seen that mortality is a severe problem in geriatric age group. Advanced age and high burn percentage have a significant correlation with mortality.

**Keywords:** Burn, advanced age, mortality, flame, hot water, electricity

## PP-0997 [Wound, wound care and burn]

## TRALI Syndrome Developing in A Patient with Major Burn

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**Objective:** There are lots of complications developing after blood and blood product transfusion.

Transfusion-related acute lung injury (TRALI) is one of the most common causes of mortality due to transfusion, but it is also the least known. In a UK study, it is seen in every 1/5000 transfusion and 1/625 patients. Consensus on TRALI is accepted as acute impairment of lung function, detection of symptoms within 6 hours of transfusion, bilateral infiltration when PaO<sub>2</sub>/FiO<sub>2</sub> ≤ 300 or SpO<sub>2</sub> is under 90% on chest X-ray, absence of acute lung injury before transfusion and absence of left atrial findings.

**Material and Methods:** In the examination of a 22-year-old male patient who was admitted to our clinic at the 48th hour of the explosion in the external center, there were 2nd and 3rd degree burn areas at the rate of 25%. His general condition was moderate, his conscious was open and he was oriented and cooperated. After FFP (fresh frozen plasma) given at the 5th day of the follow-ups of the patient who was performed burn resuscitation, respiratory distress began in hours, his general condition deteriorated, bilateral diffuse infiltration was detected in his chest X-ray, patient's blood gas values deteriorated, and saturations regressed to 80%.

**Results:** TRALI diagnosis was established as a result of examination of patient. The supportive treatment was started, and he was intubated. It was paid attention that the patient did not remain hypovolemic.

**Conclusion:** TRALI should be considered in patients with sudden onset of respiratory distress, especially who are performed transfusion, and we should begin CPAP, mechanical ventilation and supportive treatment for the patient without losing any time. It is important to distinguish between pulmonary edema in differential diagnosis. The most important stage in the treatment begins with considering the diagnosis.

**Keywords:** Lung, TRALI, burn

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## PP-0998 [Wound, Wound care and Burn]

# Chronic Wound Clinic; Our 7 Years of Experience

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**Objective:** In parallel with the increasing average life span, chronic wounds occurring rarely in the past are more common every day. In this sense, we aimed to retrospectively evaluate the patients who were hospitalized in our chronic wound service of our hospital since its establishment.

**Material and Methods:** Patients who received inpatient treatment at our chronic wound clinic were evaluated retrospectively between April 2010 and December 2017. Gender, age, diagnosis of admission, mean hospitalization day, number of amputations of the patients were recorded and statistically evaluated.

**Results:** The mean age of the 1014 patients who received inpatient treatment during the study was  $60.04 \pm 13.30$ . 747 (73.7%) of the patients were male and their mean age was  $59.13 \pm 13.06$ . 849 (83.72%) patients were admitted due to diabetic foot ulcer and it was detected to be the most frequent cause of chronic wound. A total of 155 patients were amputated. While one of the 2nd, 3rd and 4th fingers of 41 (28.5%) of the patients were amputated, multiple finger amputation was performed in 37 (25.7%) of the patients and knee level amputation was performed in 20 (13.9%) of the patients. The mean duration of hospitalization was  $32.07 \pm 30.6$  days.

**Conclusion:** Chronic wound is an important health problem that is increasingly seen in our country. Considering that the treatment takes a long time and the number of troublesome and serious amputations is high, accurate determination of the under-risk patients and provision of proper precautions for protection are essential.

**Keywords:** Experience, chronic, wound.

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## PP-1001 [16th Surgical Nursing Congress Reports]

# The Effect of Regulations Made in the Department of Emergency Medicine on Patient Satisfaction

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**Objective:** Patient satisfaction is defined as the rate at which the desired outcome of a given illness care is increased and the possible unwanted consequences are reduced. Emergency services that provide 24 hours uninterrupted service are the vitrines of hospitals. Emergency services are required to provide health care services quickly and with quality. With this study, we aimed that the services provided in the emergency departments are organized well, carried out without any problems, served in good conditions and to increase patient satisfaction.

**Material and Methods:** A number of regulations were made in İstanbul to increase patient satisfaction in a Training and Research Hospital Emergency Medicine Clinic. Patients' telephone information was updated in the registration areas of patients who applied to the emergency medicine clinic and information messages were sent to the patients' phones. "Dear Patient name and surname Welcome to our emergency service. You will be called as soon as possible. We wish you a quick recovery" The number of health staff in the field of triage was increased, vital findings of the patient were taken with a digital monitor and a brief anamnesis inquiry was made and the patient was fitted with an identity wrist band. The number of seats in the patient waiting area has been increased. Tea and coffee machines were put in the waiting area. The number of patient welcoming personnel was increased and service was provided for the handicapped and elderly patients to be examined, treated and transferred to other services. The number of patient call screens was increased, the information that the examination turn of the patients have come was reflected on the screens both visually and aurally. The laboratory results screen was put and the information about whether the results are ready or not, or which results are ready and which results are waited were reflected to the screen. The anxiety of

the patient was eliminated. A night pharmacy screen was created in the waiting area. The treatment was allowed to begin in a short time.

**Conclusion:** It was observed that the rate of patient satisfaction increased by 98% and that the white code (violence against health workers) decreased with these regulations made in Emergency Medical Clinic.

**Keywords:** Emergency medicine, patient satisfaction, nurse

## PP-1002 [Surgical Area Infection, Surgical Intensive Care]

# Preoperative Antibiotic Prophylaxis in Surgical Patients is a Problem that Needs to be Addressed

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**Objective:** In connection with the spread of multiresistant microorganisms, the rational use of antibiotics is acute all over the world. The reason for this situation is a long history of improper use of antibacterial drugs. One aspect of the rational use of antibiotics is antibiotic prophylaxis (ABP).

The aim of the study is to evaluate the rationality of using antibiotics in patients with surgical profile.

**Material and Methods:** A retrospective study of 200 medical histories of patients with surgical profile who were on inpatient treatment at the Scientific Center of Surgery of the Republic of Azerbaijan was conducted using random sampling. "When assessing the history of the disease, the validity of prescribing antibacterial drugs, the time of administration of the first dose of antibiotic, the adequacy of the dose regimen were evaluated.

**Results:** Of the 300 cases analyzed, antibiotic prophylaxis was shown in 274, which was 91.3%. Among them, the percentage of ABP conducted in compliance with the basic rules was 12.7% (38 cases). The use of ABP with incomplete adherence to the basic rules was 14.3% (43 cases), of which unreasonable prolongation of the antibiotic administration period for prophylaxis beyond 24 was 37.2% (16 cases). ABP was not performed in 74.3% (patients (222 cases), 67.6% of them (150 cases) were cases of unreasonable prescribing of antibacterial therapy after an operation for 5 to 20 days. Thus, the results of the study showed that in most cases, in the presence of indications, ABP was not performed, while there was a replacement of preoperative ABP with postoperative antibiotic therapy. This leads to a significant overexpenditure of antibacterial drugs in surgical sections, an increased risk of developing adverse reactions, as well as to the selection of resistant flora. The presented results demanded a number of administrative decisions, namely, the clinical pharmacologist conducting an educational medical conference on the main aspects of ABP, issuing an order to optimize the use of antibiotics in surgical sections, the inclusion of routine checks on the rationality of antibiotic prescribing in surgical sections in the work plan of the clinical pharmacologist.

**Conclusion:** In the work of surgical sections, the unjustified prescription of antibiotics in the postoperative period was 50.5%. To increase the rationality of the use of antibacterial drugs, it is necessary to conduct additional educational activities, the administrative restriction of prescribing antibiotics in the postoperative period, and regular expert evaluation of pharmacotherapy.

**Keywords:** Antibiotic prophylaxis treatment in surgery

## PP-1004 [Emergency Surgery and Trauma]

# Late Presentation of Microperforation Secondary to Blunt Abdominal Trauma: Two Case Reports

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**Introduction:** Late presentation of microperforation after small intestinal ischemia due to blunt abdominal trauma is very rare. In this article, we aimed to present the patients having no abdominal pathology in initial admission after the accident and who were admitted to the hospital with late acute abdomen picture.

**Case 1:** A 24-year-old male patient with a history of traffic accident about 1.5 months ago applied to our emergency service with complaints of abdominal pain 4 times during this period. The patient was discharged without any acute abdominal pathology. In physical examination performed at his last admission, defense and rebound were positive, infection parameters were high, diffuse pathology wall thickening was detected in distal ileum and a long intestinal segment in iv contrast abdominal tomography, there was an increase in mesenteric vascularity at this level and the finding of scalloping, there was clustering in the bowel loops which was higher in the right lower quadrant of the abdomen and appendix and cecum were normal. The patient was operated urgently with the diagnosis of acute abdomen.

In the operation, the appendix was observed to be normal and the small intestines appeared like an edematous and red mass at 20 cm proximal area of the cecum. Small intestinal resection and appendectomy were performed when the mass could not be opened with blunt and sharp dissection. Pneumonia and wound site infection have developed in post-operative follow-ups. The wound of the patient whose treatment was completed, was sutured and the patient was discharged

**Case 2:** A 23-year-old male patient with an in vehicle traffic accident history about 1.5 months ago was admitted to our emergency department due to increasing intermittent abdominal pain complaints in the last two days. In the abdominal ultrasonography, there was an increase of echogenity in the surrounding mesentric tissues in an almost 6x3,5 cm region of the lower right quadrant of the abdomen and free fluid between bowel loops; a tubular structure with a length of 4 cm having single wall thickness of 4,5 mm and unclear wall integrity and (perforated appendicitis). The patient having been established the diagnosis of perforated appendicitis was operated after anesthesia preparation was made. It was observed in the operation that the appendix was normal, but it appeared that the small intestines formed a conglomerate structure about 5 cm proximal to the cecum. This area was separated by blunt and sharp dissection. Leakage control was made. A drain was placed in the operation area of the patient in whom no leakage was detected and the abdominal wall was closed. No complication was observed in the postoperative follow-up, and drain of the patient was removed and he was discharged.

**Conclusion:** We think that the picture in both of our cases is such that late presentation of microperforation developing after the ischemia developing in the small intestine after blunt abdominal trauma caused acute abdomen. The diagnosis of small intestine ischemia and microperforation associated with abdominal blunt trauma is difficult to establish at an early stage and early diagnosis and treatment is very important in reducing mortality and morbidity. A possible intestinal ischemia and microperforation should be kept in mind in cases experiencing such blunt abdominal trauma. Close clinical follow-up and appropriate radiological imaging should be performed.

**Keywords:** Acute abdomen, ischemia, blunt trauma, microperforation

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## PP-1005 [Emergency surgery and trauma]

# The Torsion of a Wandering Pelvic Spleen: a Case Report

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**Introduction:** Wandering spleen is a rare clinical picture because the spleen is not found in the normal anatomical location and ligaments enabling the attachment to the surrounding tissues are loose and absent. Wandering spleen torsion should also be included among the pre-diagnoses that should be considered for patients having acute abdomen developing suddenly and when there is a mass in the abdomen examination. The actual diagnosis should be established with the help of additional imaging and acute abdomen should be treated as soon as possible. In our case, our patient was admitted to the emergency service due to acute abdomen and healing was achieved conducting splenectomy after establishing the diagnosis of wandering spleen torsion by examination and abdominal ultrasonography.

**Case:** A 27-year-old female patient was admitted to our emergency service due to abdominal pain which started the same day. She did not have any comorbidity or surgery in her medical history. There was a mass filling the pelvis and diffuse tenderness in the examination. The patient's fever was normal, mild dyspneic-tachycardic and normotensive. In the blood count, the number of white cells was  $8,6 \cdot 10^3/\mu\text{L}$  and C Reactive Protein was 110 mg/L. Other laboratory parameters were normal. In the ultrasonography performed under emergency conditions, the spleen was pelvic and the long axis dimension of the spleen was approximately 16 cm and there was (infarct?) of about  $7 \times 4$  cm in the inferior part of the spleen. The patient underwent emergency laparotomy. At exploration, it was observed that the spleen filled the pelvis, there was infarct in the inferior part of the spleen, and the splenic artery-vein rotated 2 full turns (720 degrees). Splenic vende had a diffuse thrombus on palpation. After detorsion of the splenic vascular structures, splenectomy was completed by isolating and connecting the splenic artery and vein from the pancreatic tail. The patient was discharged on postoperative 3rd day without any complication.

**Conclusion:** Wandering spleen torsion should be considered in differential diagnosis of a patient who presents with an abdominal pain complaint of sudden onset, and have an acute abdomen and a palpable mass in the examination. Additional imaging techniques should be used to confirm the diagnosis and emergent surgical intervention should be performed once the diagnosis is confirmed. It should not be forgotten that wandering spleen torsion causes rarely acute abdomen.

**Keywords:** acute abdomen, wandering spleen, torsion



# PP-1006 [Gastrointestinal System Surgery (esophagus, stomach, small intestines)] Malignant Melanoma Gastric Metastasis; Case Report

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**Case:** A 46-year-old male patient presented with weight loss, nausea and vomiting complaints. He had a history of excision of malignant melanoma on the left forearm about 60 months ago. In the following months at different times, mass excision invading the left frontal bone and mass excision from the right thigh and right thorax wall were performed. The pathologies were compatible with MM. In the same period, he received radiotherapy (RT) for ankle, knee and pelvic metastases. On developing dyspeptic complaints, ulcerovegetan mass with irregular margin extending from the corpus to the antrum was detected. His biopsy was compatible with MM metastasis. Hemoglobin was measured at 8 gr/dL. No other pathological laboratory findings were found. Computerized tomography (CT) revealed an increase in wall thickness at the antrum level. The liver was normal. In PET-CT, metabolic activity at malignancy level was detected in antrum. The patient with severe nausea and vomiting was operated due to distal gastric MM causing gastric outlet syndrome and anemia. At the exploration, a tumor attached to transverse colon and pancreas in antrum was detected. The tumor caused gastric outlet syndrome. Palliative subtotal gastrectomy and segmental colectomy were performed. On the fifth postoperative day, the patient tolerating normal oral intake was discharged without any problems. 8x3.5 cm malignant melanoma (pT3) was detected. A minimum of 1 cm clean surgical margin was obtained and 5 benign and 7 malignant lymph nodes were detected.

MM is the most common metastatic tumor to GIS. It was found that the most frequent metastases were small intestine (50%), colon (31.3%), and anorectum (25%) respectively. Clinical metastases were detected in only 1-4% of these patients while autopsy examinations revealed a GIS metastasis rate of 6%. MM gastric metastases are very rare. It is quite difficult to detect them since they progress with nonspecific symptoms and significantly shorten the survival time. Patients with MM history, GIS symptoms and anemia have a good chance of being diagnosed with endoscopic evaluation. Median survival in gastric metastases is between 4 and 6 months. In our case, gastric metastasis was detected 60 months after primary skin lesion. There are intervals in the literature that extend to 10 years. Surgical indications in our case are gastric outlet syndrome and development of anemia. It is obvious that gastrectomy will not provide curative expectations at the R2 level in the metastatic patient. However, when complications such as the ones we encounter develop, surgery may be the only intervention. In Ollila's study, 124 MM patients with GIS metastasis were examined and found to have a 6-fold increase in survival in whom resection was performed. In selected cases, surgery can improve both survival and quality of life.

**Conclusion:** As a result, MM tends to metastasize and the possibility of GIS metastasis in patients with nonspecific dyspeptic complaints and anemia should be kept in mind. Surgery may be the only effective option in selected cases.

**Keywords:** Melanoma, stomach, metastasis



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**VIDEO PRESENTATIONS**

## VP-006 [Obesity]

## Pre-Operative Management of Adverse Situations in Laparoscopic Mini Gastric Bypass Surgery

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**Objective:** As is known, mini gastric bypass is commonly used in obesity and metabolic surgery. If the gastric staple line and the gastrojejunostomy anastomosis are not in the desired stability as a pre-operative complication, they can pose a vital risk in the postoperative period. In this patient, the tip of the stapler passed through the loop caused a full-thickness defect in the small bowel prepared for a gastrojejunostomy procedure. This video presentation was prepared to emphasize the methods to be followed in such cases and the measures to prevent defects.

**Surgical Technique:** Five trocars, a stapler and a gastric tube were prepared for the standard laparoscopic mini gastric bypass surgery. Since omentum took extra space, it was transected. The place fixed at 200 cm distal from the ligament of Treitz was prepared for the Gastrojejunostomy. In this case, there was a problem because the lower jaw of the stapler perforated the small bowel while the stapler was passed through the loop prepared for the surgery. Since the perforated area was at the upper side, the anastomosis was performed there. The area opened before for the anastomosis was closed with a stapler so as not to cause narrowness by passing a tube through it. We did not anastomose from this area, because we thought that the perforation area would be in the gastrojejunostomy line and could increase the risk of leakage. The other method could be gastric bypass, but since the stomach was prepared in the form of a tube before, we thought that the Roux N-Y gastric bypass modification would be the next and last option.

**Conclusion:** It should be checked if the meso is adequate for anastomosis before the sleeve gastrectomy in mini-gastric bypass cases. If omentum takes up too much space, transecting or partial resection is recommended if necessary. Since the operation is started in the reverse trendelenburg position and the gravity effect is reduced during gastrojejunostomy, the position change close to the trendelenburg position will reduce the anastomosis tension. The thick part of the stapler must be located in the intestinal lumen. We think that the preoperative complication rate will decrease when we pay attention to these aspects.

**Keywords:** Gastric bypass, intestinal injury, preoperative complication

## VP-007 [Obesity]

## Mini Gastric Bypass Revision in the Case with Gastroesophageal Reflux and Esophagitis after Sleeve Gastrectomy

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**Objective:** Morbid obesity is one of the most common health problems today. It is important to be able to cope with the long-term results of laparoscopic sleeve gastrectomy surgeries performed frequently. In this case, there were gastroesophageal reflux that developed after sleeve gastrectomy, oral intake intolerance and nausea that did not recover with diet and medical treatment. It was observed on the endoscopy that the hiatal hernia was normal and 3 cm away from the esophagogastric junction. Laparoscopic revision of the mini-gastric bypass was performed on the gastric sleeve due to the diagnosis of stage B esophagitis.

**Surgical Technique:** The operation was started in reverse trendelenburg position with four trocars. The gastric sleeve was released from the surrounding tissues by eliminating the cohesions. Stomach was transected from the region adjacent to the incisura angularis and at a distance approximately 10 cm to the diaphragmatic hernia with a stapler. The small bowel loop was approached to the posterior wall of stomach approximately 200 cm from the Treitz ligament. Anastomosis was applied in the stomach and small bowel loop with stapler through the full-thickness opening. After the orogastric tube was advanced into the small bowel loop, the opening was closed with stapler. Gastric sleeve leak was checked. The drain was placed.

**Conclusion:** Gastroesophageal Reflux Disease can come out without pyloric resistance, reduced stomach volume, reduced gastric emptying and hiatal hernia due to increased intragastric pressure after the sleeve gastrectomy. It is obvious that gastroesophageal reflux after sleeve gastrectomy is frequently encountered although there is a consensus that weight loss leads to a decrease in gastrojejunogastric reflux. The incisura stenosis should be considered in the differential diagnosis. Symptoms of gastroesophageal reflux, nausea

and oral intake normalized with the revision of mini-gastric bypass. We consider that the revision surgery should be performed to reduce the passage resistance in symptomatic cases of those who had undergone sleeve gastrectomy.

**Keywords:** Sleeve gastrectomy, gastroesophageal reflux, gastric bypass revision

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## VP-016 [Gastrointestinal Surgery (esophagus, stomach, small bowel)]

# Laparoscopic Surgical Treatment of Superior Mesenteric Artery Syndrome

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**Objective:** The aim of our study is to remember SMA syndrome, one of the rare causes of inadequate oral intake and weight loss, and to share our experience of laparoscopic surgical treatment. A 19-year-old female patient who had experienced inadequate oral intake problem for 8 years and hospitalized several times for this reason was admitted to our polyclinic. Gastroscopy was performed in the patient who had no pathology in the routine laboratory examinations.

As a result of gastroscopy, the patient having stomach larger than normal was given oral contrast and images were taken under scope screening. A gastroptosis was identified in the images when the patient was in standing position. The patient with a BMI of 16.5 and a compatible anamnesis was diagnosed with SMA syndrome and underwent a total abdominal CT scan with oral-iv contrast.

**Abdominal CT scan result:** The left renal vein was localized between the superior mesenteric artery and the aorta, and a significant thinning was observed at this level of calibration. The stomach, the first and second parts of the duodenum were slightly dilated. The duodenum was collapsed in the third part. In the result of the investigation of the superior mesenteric artery syndrome, the aorta mesenteric angle was measured at 18 degrees. Aorta mesenteric distance was 4 mm at the 3rd part of the duodenum. The findings support the superior mesenteric artery syndrome. An operation was planned for the patient who had been hospitalized many times before and had not benefited from the medical treatment. The duodenum was cauterized in the laparoscopic surgery by using 3 trocars and a duodenojejunostomy was performed with laparoscopic linear stapler at approximately 20 cm from the treitz. The patient whose oral feeding was started on the postoperative 4th day and discharged on the postoperative 5th day was seen to have significantly improved appetite and oral feeding in the postoperative outpatient clinic controls. We wanted to show in this case that laparoscopic surgery can provide good results in patients with SMA syndrome who do not respond to medical treatment.

**Keywords:** Duodenojejunostomy, laparoscopic, syndrome, SMA

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## VP-017 [Gastrointestinal Surgery (esophagus, stomach, small bowel)]

# Laparoscopic Resection of a Difficult Benign Gastric Tumor

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**Objective:** We aimed to show that difficult tumor operations in the stomach may be possible with the endoscopy-assisted laparoscopic resection.

**Content Description:** The resection of a 6-cm benign tumor located close to the gastroesophageal junction in a 32-year-old male patient with the video endoscopy-assisted laparoscopic surgery technique after releasing it completely from the gastroesophageal junction is shown in the video.

**Conclusion:** In today's surgical practice, when considering the results, it is obvious that the laparoscopic surgery is superior to the conventional surgery in selected suitable patients with shorter hospitalization, shorter duration for return to work, less postoperative intra-abdominal adhesions and ileus, lower wound infection rate, more comfortable postoperative process, more cosmetic outcomes and lower risk of postoperative hernia in the long term. In equipped centers with high laparoscopic surgery experience, video endoscopy-assisted laparoscopic surgery may be considered in the first plan when the treatment of the gastrointestinal system lesions following a detailed preoperative examination is scheduled.

**Keywords:** Benign gastric mass, laparoscopic surgery, video endoscopy

## VP-018 [Gastrointestinal Surgery (esophagus, stomach, small bowel)]

## Laparoscopic Radical Subtotal Gastrectomy in a Case with Early Stage Gastric Cancer; Video Presentation

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**Introduction:** Laparoscopic surgery has increasingly been taking the place of the open surgery in the early stage gastric cancer surgeries, and the studies have been continuing for the advanced stage gastric cancer. However, adequate lymph node dissection due to tumor localization and type makes the laparoscopic gastric surgery technically difficult. In this article, we aimed to present the case who underwent Laparoscopic Distal Subtotal Gastrectomy and D2 Lymph node dissection for the lesion in the gastric antrum and the operation technique.

**Case:** A 2.5-cm polypoid lesion with raised edges and a collapsed center and located in the gastric antrum was detected through endoscopy in 52-year-old female patient who was admitted to our center with dyspeptic complaints. A diagnostic and therapeutic endoscopic submucosal dissection (ESD) was planned for the entire lesion upon the detection of low-grade dysplasia on the biopsy. However, upon the detection of muscularis propria invasion in the lesion in the endoscopic ultrasonography, ESD was cancelled and surgery was scheduled. In the abdominal computed tomography examination for staging, no distant metastasis and pathologically enlarged lymph nodes were detected in the patient and D2 lymph node dissection with laparoscopic distal subtotal gastrectomy and Roux-N-Y gastrojejunostomy were performed in the patient. The operation lasted 320 minutes. The total amount of bleeding during the operation was 220 ml and no blood transfusion was performed. The patient was allowed for oral fluid intake on the 3rd postoperative day and discharged on the 7th day without any problems. The pathological examination revealed that the lesion contained multiple foci of high grade dysplasia and 17 reactive lymph nodes were removed.

**Conclusion:** The safety of laparoscopic radical gastrectomy for early stage gastric cancer has been proven clinically and accepted as the standard approach. However, oncologic results and adequate staging in the laparoscopic gastrectomy depends on the adequate lymph node dissection and it should be performed in experienced centers.

**Keywords:** Laparoscopic gastrectomy, lymph node dissection, early stage gastric cancer

## VP-019 [Gastrointestinal Surgery (esophagus, stomach, small bowel)]

## Revision of the Nissen Fundoplication and Mid-Gastric Plication Procedure with Partial Gastrectomy and Laparoscopic Roux En Y Gastric Bypass

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Gastric bypass is the gold standard for morbidly obese patients with gastroesophageal reflux. However, it is not suitable for the 1st and 2nd stage obese patients. Mid-gastric plication and nissen fundoplication are defined for this group of patients. We aimed to share a video of the gastric bypass revision surgery of a patient who was admitted to our clinic for the reason of inadequate weight loss even though he/she underwent this operation. Revision surgery after gastric plication is in the literature. However, the revision of mid-gastric plication and nissen fundoplication combination surgery have not been reported previously. Patient with 48 kg/m<sup>2</sup> (120 kg) body mass index underwent nissen fundoplication and mid-gastric plication lost 28 kg in the first 6 months and complaints of reflux disappeared. In the following period he/she quickly regained the weight he/she had lost. Patient with of 45 kg/m<sup>2</sup> (112 kg) body mass index underwent laparoscopic partial gastrectomy and gastric bypass revision procedures. Khazakka et al first applied a procedure consisting of a combination of gastric plication and nissen fundoplication to gastroesophageal reflux patients with 32-35 kg/m<sup>2</sup> body mass indexes in the 1st and 2nd stage obesity groups. The patients' complaints of reflux were reduced and they herewith lost about 10 kg. Same results were obtained in other similar studies, but various complications and revisions were reported.

We preferred the revision with gastric bypass, considering that the patient had no arterial feeding from the large curvature and that the symptoms of reflux can reoccur if sleeve gastrectomy is performed.

**Keywords:** Bariatric surgery, gastroesophageal reflux, gastric plication

## VP-020 [Gastrointestinal Surgery (esophagus, stomach, small bowel)]

# Minimally Invasive Intra-gastric Laparoscopic GIST Excision

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Stomach stromal tumors constitute 1-2% of the stomach tumors. A 67 year old woman was admitted with dyspeptic complaints. Endoscopic USG: A stapled intra-gastric laparoscopic gastric wedge resection was planned for the patient with 25\*15 mm mesenchymal tumor.

**Objective:** The aim of our study is to increase the awareness of the intra-gastric laparoscopic technique that can be applied on the lesions in the lumen of the stomach and especially in the sections of cardia and fundus, and to share our experience.

**Preoperative Findings:** A polypoid lesion about 2-2.5 cm in the incisura cardialis at the gastric cardia level.

**Surgical Procedure:** The abdominal wall was opened with an approximately 3-cm superior incision. Two suspension sutures were implemented in the stomach. The stomach lumen was entered with a cautery through the suspensions. The externally prepared glove port was advanced through the opening. The stomach was insufflated. The tumor was reached and a suspension was placed on it. Its root was transected together with the submucosal surface by using endo-GIA stapler. The tumor was taken out of the opening in the stomach. The stomach was closed in a double layer closure.

**Conclusion:** The patient was discharged on the 3rd postoperative day without any problems. There are very few examples in the literature. This method was successfully applied several times in our clinic before. Less post-operative pain, earlier return of respiratory gastrointestinal functions, shorter length of hospital stay, no need for large laparotomy, and a much clearer identification of the lesion with intra-gastric exposure are the advantages because of its minimal invasive nature. We think that, with the spread of the operation, it can be performed safely in experienced hands on selected eligible patients.

**Keywords:** Minimal, invasive, intra-gastric, laparoscopic excision

## VP-021 [Gastrointestinal Surgery (esophagus, stomach, small bowel)]

# Robotic-Assisted Transthoracic Esophageal Diverticulectomy: 3 Case Series

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**Introduction:** Esophageal diverticulum is a rare disease that causes symptoms such as dysphagia, halitosis, chest pain and regurgitation. The surgical indications can change and the operation is performed in the presence of a diverticulum greater than 3 cm in size because any of these symptoms leads to an increased risk of malignancy and aspiration. Surgery is the preferred treatment method and can be performed with different approaches such as open/robotic or laparoscopic, transhiatal/transthoracic ways.

**Case:** Three patients who were examined preoperatively by using esophagogastroduodenoscopy, esophageal manometry and computerized tomography and diagnosed with epiphrenic diverticulum were taken to the operating theatre. Robotic-assisted transthoracic esophageal diverticulectomy was performed on the patients. The mean operation time was 211 minutes, no blood loss was observed, and no intraoperative complications developed. Postoperative complications during the follow-up procedures of the patients and additional procedures are explained in the case report in detail.

**Discussion:** Robotic assisted transthoracic esophageal diverticulectomy was performed for the esophageal diverticulum for the first time and it is a method that can be performed safely and effectively in selected patients.

**Keywords:** Esophageal diverticulum, robotic, transthoracic

## VP-022 [Colon and Rectal Surgery]

# Robotic Complete Mesocolic Right Hemicolectomy Technique

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**Introduction:** Complete mesocolic excision in colon cancers was described by Hohenberger et al. in 2009 and it became the gold standard surgical technique in the surgical treatment of colon cancer. Studies showed that more lymph nodes were removed with this technique than with the classical excision. In this presentation, we aimed to share the details of the surgical technique applied to a patient who underwent robotic complete mesocolic excision for right-sided colon cancer.

**Case Report and Technical Details:** In the colonoscopic examination applied to a 41-year-old man due to anemia, an intraluminal lesion was detected in the colon and biopsy result was determined as adenocarcinoma. Surgical procedure decision was made for the patient who did not have metastasis in the screening examinations and the robotic complete mesocolic excision for right-sided colon cancer was performed. Following the endotracheal intubation, the patient was positioned (supine, arms closed, 150 tilt to the right, and Trendelenburg position). Da-Vinci S Robotic System (Intuitive Surgical System, USA) was used in the operation. A 12-mm camera port was inserted from 7-8 cm on the left side of umbilicus by using open method and the abdomen was inflated with CO2 gas. Docking procedure was completed following the completion of laparoscopic exploration and removal of the small bowel loops from the dissection site. The dissection was started from the bottom to the top starting from the medial. The ileocolic artery and vein, the right colic vein, the superior mesenteric artery and the vein exit site were ligated and cut. The right branch of the middle colic artery was connected from the bifurcation level and cut. After vascular control, the right colon was released by advancing from medial to lateral. Right ureter was seen and preserved. Transverse colon mesos were prepared and lumens were closed with endoscopic linear stapler from the terminal ileum and cut. Following the completion of the resection, the resected material were taken to the lower left quadrant. Ileum loop and transverse colon were anastomosed side-by-side using endoscopic linear stapler. After anastomosis, stapler openings were closed with continuous sutures. The place of resected material port was enlarged and the resected material was taken out of the abdomen. Postoperative follow-up was smooth and the patient was discharged on the 4th day. In the result of the pathologic examination, the patient was evaluated as T3N1M0 and taken to the chemotherapy program.

**Conclusion:** The three dimensional image provided by the robotic surgery, its maximum range of motion capacity up to 540 degrees and its conveniences for the surgeon with the elimination of the tremor help making the surgical anatomy to be perceived more easily, and these distinctions allow the operation without leaving the embryological plans. Robotic surgery, which also includes the classic advantages of minimally invasive surgery, will find more areas of utilization in the following years with the elimination of its disadvantages.

**Keywords:** Hemicolectomy, complete mesocolic excision, robotic

## VP-023 [Colon and Rectum Surgery]

# Wide Local Excision for Perianal Paget's Disease

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**Objective:** Primary perianal Paget's disease (PPD) is extramammary Paget's disease on the perianal skin area where no other underlying malignancy such as rectal or anal canal cancer is detected. In this video, extensive local excision treatment of PPD is presented.

**Video Content:** The results of gastroscopy, colonoscopy, mammography, thorax and abdominopelvic computed tomography (CT), PET-CT and gynecological examinations made for the investigation of underlying malignancy in a 53-year-old female patient with PPD confirmed by skin biopsy were normal. According to the laboratory results, only carcinoembryogenic antigen (CEA) level was high (10,6 ng/mL, reference range: 0-5 ng/mL). Mechanical bowel cleansing was performed for the patient before the surgery. Wide local excision was performed on the perianal skin affected by PPD involving approximately 1 cm of healthy skin in the lithotomy position. The defect was closed with a split thickness skin graft (STSG). A rubber rectal tube was placed following the procedure. The oral intake of the patient was started on the 1st postoperative day, the dressing was opened and the rectal tube was removed on the 3rd day, and she was discharged on the 4th day. Pathology was compatible with PPD. In the 3rd postoperative month follow-ups, there was no recurrence or newly discovered malignancy in the patient.

**Conclusion:** Extensive local excision is the most preferred surgical method in the treatment of primary PPD. STSG is useful in closing the skin defect that occurs.

**Keywords:** Paget's disease, perianal, wide local excision

## VP-025 [Colon and Rectum Surgery]

# Laparoscopic Ventral Mesh Rectopexy in the Patient with Rectal Prolapse

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**Objective:** In the treatment of external rectal prolapse (ERP), the laparoscopic ventral mesh rectopexy (LVMR) has gradually become a common surgical technique especially in the USA, albeit at a slower rate in Europe. In the video, LVMR operation for the patient with ERP is presented.

**Case:** A 65-year-old woman is admitted to the hospital with a complaint of chronic rectal prolapse during defecation. The physical examination of the patient complaining of stool leakage several times a week and gas incontinence shows that she has Oxford grade 4 rectal prolapse caused by straining. Patient with normal colonoscopy result was prepared for the operation with the risk of ASA III. The patient underwent LVMR. The patient starting oral feeding on the first postoperative day is discharged on the 3rd day.

**Conclusion:** LVMR is a technique that can be preferred as a safe and minimally invasive method in the treatment of ERP.

**Keywords:** Rectal prolapse, laparoscopy, ventral mesh, rectopexy

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## VP-026 [Colon and Rectum Surgery]

# Transperineal Mesh Repair in the Patient with Isolated Rectocele

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**Objective:** There are different repairs applied by different disciplines in the treatment of rectocele which is among the obstructive defecation syndromes (ODS). However, what should be considered here is that there may be other pelvic organ impairments that often accompany ODS syndromes. In the video, the transperineal mesh repair is shown in a patient who underwent abdominal surgery previously and had only rectocele detected in dynamic MR-defecography.

**Case:** A 69-year-old woman was admitted to our hospital with frequent bowel movements, fecal impaction, and the need for manual intervention complaints. The patient had hypertension and past surgical history due to hysterectomy and perforated appendicitis. In the physical examination, median incision scars were found under and above the umbilicus and a rectocele was found in the rectal examination. The patient with normal colonoscopy result underwent a dynamic MR defecography for pelvic organ pathology. A 4.5 cm isolated rectocele was determined and a surgical operation was planned in ASA II risk group. The patient underwent transperineal mesh repair. On the first postoperative day oral feeding was started and she was discharged on the third day without any problems.

**Conclusion:** In the cases where there is no accompanying pelvic floor pathology in the rectocele treatment, transperineal mesh repair is a treatment option that can be preferred.

**Keywords:** Rectocele, transperineal mesh repair, obstructive defecation

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## VP-039 [Hepatobiliary Surgery]

# Robotic Cholecystectomy and Choledochal Stone Extraction

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A 83-year-old woman with the complaints of abdominal pain, loss of appetite, and weight loss underwent USG, and a hydropic gallbladder and a 2 cm choledochal stone were detected. Subsequently, a choledocholithiasis was detected in the upper abdomen MR-MRCP. ALP and GGT were high in the blood values of the patient and bilirubin values were reported in the normal limits. Upon the failure of the ERCP procedure, the patient underwent robotic cholecystectomy, choledochal stone extraction, and T-tube placement. On the 4th postoperative day, the patient was discharged after reminding of the follow-up appointments.

**Keywords:** Robotic cholecystectomy, choledochal stone extraction, T-tube placement

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## VP-040 [Hepatobiliary Surgery]

# Laparoscopic liver adenoma resection

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**Introduction:** In the abdominal CT scan; a 44x32 mm lesion was detected in the liver segment 3 of the 58-year-old female patient admitted to the gastroenterology polyclinic with abdominal pain. Upon the detection of a 42x40 mm solid lesion (Adenoma?) in the upper abdominal magnetic resonance imaging, the patient was hospitalized for the resection. We aimed to present our experience on excision of adenoma in laparoscopic segment-3 with the consent of the patient.

**Video Content:** The surgical operation was performed in the reverse trendelenburg position and while the surgeon stood between the patient's legs and the camera assistant was on the left side of the surgeon. Pneumoperitoneum was formed with 14 mmHg CO<sub>2</sub>. A 11-mm camera port was placed in the umbilicus superior, and 11-mm study ports were placed in the left and right side of the camera port. It was seen that a 4 cm exophytic adenoma in liver segment 3 extended in an exophytic way. The limits of resection with monopolar cautery were determined including the normal liver parenchyma at least 1-cm in size. The identified resection area was cut by the help of ultrasonic energy device. Bleeding control was performed by using bipolar sealing device and monopolar cautery. The excised adenoma was taken into the endobag and it was taken out of the abdomen through the camera port incision in the umbilicus superior. Port placement sites were closed with number 1 absorbable suture material by using suture stepper. There was no drain placement in the abdomen in the operation and the patient was discharged without any problems on the 1st postoperative day. In the pathologic examination, the excised material was reported as hepatic adenoma weighing 41 gr.

**Conclusion:** Laparoscopic operations are more advantageous than laparotomy operations in terms of patient comfort and healing process. It should not be forgotten that exophytic lesions in the liver can be laparoscopically resected.

**Keywords:** Liver adenoma, laparoscopy, adenoma resection

## VP-041 [Hepatobiliary Surgery]

# Liver Segmentectomy with Laparoscopic Real-Time Indocyanine Green

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**Introduction:** We aimed to present the case of liver segmentectomy with laparoscopic real time intravenous (IV) indocyanine green (ICG) injection.

**Case:** The 51-year-old male patient was taken to the operating theatre and laparoscopic exploration was performed with 4 trocars in the abdomen. The demarcation line was seen between the tumor and the parenchyma border after the real-time intravenous ICG injection. Liver segment 5 resection, hilar lymphadenopathy excision and cholecystectomy were performed.

**Conclusion:** Laparoscopic liver surgery is used for minor and major resections, hemihepatectomy, segmentectomy, resection of posterior and difficult segments, and tumor resection. LED-based IR cameras have been a significant development in the use of facilitating methods in tumor surgery. Preoperative-real time IV ICG administration leads to a demarcation line between the liver parenchyma and the tumor and helps to determine the resection margin. Tumor location and laparoscopic surgery with ICG can be performed in superficial lesions safely.

**Keywords:** Hepatocellular carcinoma, indocyanine green, liver, laparoscopy

## VP-042 [Hepatobiliary Surgery]

# Laparoscopic Metastasectomy Application for Liver Metastasis of Breast Cancer

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**Introduction:** Resection of liver metastases in breast cancer patients is controversial. We aimed to present the case of metastasectomy performed laparoscopically in our clinic.

**Case:** Five years ago, 43-year-old female patient underwent a modified radical mastectomy following the diagnosis of invasive ductal carcinoma which was positive for the estrogen receptor and negative for the progesterone receptor. Hormone therapy was started for the patient followed by medical oncology and she was followed in remission for 4 years. In the routine follow-ups, a 3 cm mass was detected in the liver segment 8. A single metastasis with SUV Max value 7.7 was detected on PET-CT. We decided to perform metastasectomy in the patient. After insufflating the abdomen with a 10-mm trocar inserted above the umbilicus, falciform ligament was dissected with three 5-mm trocars inserted through the left and right upper quadrants. Then, the expansive mass seen from the hepatic capsule in liver segment 8 was resected. When the surgical margin was evaluated as positive in the frozen examination on the resected material, resection became inevitable for the patient. The surgical margin was found clean in the newly performed resection. The patient was discharged on the 3rd postoperative day. According to the pathology report, it was positive for the estrogen receptor and negative for the progesterone receptor, and the patient has been followed for 3 months.

**Discussion:** Breast cancer is one of the most common malignancies in women around the world. Liver, bone, and lung are the most common metastatic sites and metastases often lead to death. Unlike the colorectal cancers, metastases from breast cancer are usually treated with systemic chemotherapy since they are multiple. However, since the treatment success of chemotherapy regimens is not certain, the role of surgery in the treatment of metastases has become a matter of debate. There are also publications about metastasectomy extending the patient's survival. In addition to the fact that exiting radiological methods such as computed tomography and PET CT can be used in determining the location and number of metastases, there are reports suggesting that intraoperative ultrasonography gives more accurate results. Radiofrequency ablation or chemoembolization can be performed in isolated liver metastases. While our case was in the course of remission under hormonotherapy, surgery decision was made upon the development of single liver metastasis. Laparoscopy is also a feasible method in other breast cancer metastases other than colorectal cancer metastases.

**Conclusion:** A multidisciplinary approach is needed to identify the eligible candidates for liver resection among the breast cancer patients. Surgical resection can be performed as a complement to chemotherapy and/or hormonal therapy. Laparoscopic surgery is a feasible methodology in the cases with a suitable tumor site.

**Keywords:** Breast cancer, metastasis, laparoscopy

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## VP-057 [General Surgical Diseases]

# Non-Ruptured Splenic Artery Aneurysm; Laparoscopic Splenectomy and Arterial Resection

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**Introduction:** We aimed to present the patient in whom we performed laparoscopic splenectomy and splenic artery resection due to non-ruptured splenic artery aneurysm.

**Case:** A 28-year-old female patient was taken to the operation theatre. Laparoscopic exploration was performed with 4 trocars in the abdomen. Long segment resection and splenectomy were performed for splenic artery aneurysms.

**Conclusion:** Splenic artery aneurysm is more common in the middle and distal arterial segments. Transcatheter arterial embolization and stent application can be performed in small diameter aneurysm, but when the complications such as infarction, abscess, recurrence are considered; aneurysmatic vessel resection with splenectomy is the preferred treatment method. Splenectomy performed with laparoscopic splenic artery resection is a safe method in SAA surgery.

**Keywords:** Aneurysm, artery, laparoscopy, splenic

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## VP-073 [Breast Disease and Surgery]

# Reconstruction with Partial Latissimus Dorsi Muscle Flap (PLDF) Alternative to Mastectomy

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**Introduction:** Latissimus dorsi muscle has been used for reconstructive purposes after mastectomy or partial mastectomy for a long time. The aim of this study is to demonstrate that the reconstruction with partial latissimus dorsi muscle flap (PLDF) which is an alternative to subcutaneous mastectomy and implantation can be performed in a single step.

**Operation, technique:** Wide-local excision is performed for the tumor. The control of the surgical margin by the pathologist intraoperatively is followed by the sentinel lymph node biopsy and axillary dissection if necessary. The axillary incision is stretched out about 2-3 cm towards the lateral side and the latissimus dorsi muscle is reached. The muscle is retracted from the chest wall. The thoracodorsal veins and nerve are secured. Muscle is liberated from the surrounding tissue and scapula with the help of electrocautery and ligature to fit the size of the cavity properly. When sufficient muscle tissue is obtained, it is inserted into the tumor cavity through the tunnels formed under the skin towards the cavity in the breast. It is attached to the musculus pectoralis major in the bottom and to the surrounding breast tissue. Following the hemostasis, one aspirative drain is placed in the muscle region and the layers are closed appropriately.

**Discussion:** Today, the rate of subcutaneous mastectomy and reconstruction with implant has significantly increased in patients with breast cancer. Morbidity and cost rates are also high due to this treatment. Latissimus dorsi muscle has been used for reconstructive purposes after mastectomy or partial mastectomy for a long time. This study shows that partial latissimus dorsi muscle can be used safely to fill the cavity and can be an alternative to reconstruction with subcutaneous mastectomy+implant.

**Keywords:** Oncoplastic surgery, latissimus dorsi mini flap, breast cancer

## VP-104 [Colon and Rectal Surgery]

# TAH-BSO with Robotic Low Anterior Resection and NOSE through Vaginal Path

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**Introduction:** It was aimed to present a case in whom total hysterectomy with robotic low anterior resection and bilateral salpingo-oophorectomy (TAH + BSO) were performed due to rectal cancer and myoma uterine, and in whom all specimen was removed through vagina (NOSE).

**Case:** A 60-year-old female patient was diagnosed with a 1.5 cm polyp in the middle rectum in the colonoscopy performed in another hospital and a polypectomy was performed. An invasive adenocarcinoma and a positive surgical margin were reported in the patient's pathology report and she was referred to our hospital. No additional pathology was found in the pelvic MR except for a 6.5 cm myoma uteri. The polypectomy site was marked with carbon stain and the operation was performed. After the placement of the robotic ports and docking, one assistant port was placed in the lower right quadrant. Following the laparoscopic exploration, the gynecology team completed the robotic TAH + BSO procedure first and uterus, ovary, and tubas were removed from the vagina. The vagina was then closed with the help of a tampon and the robotic low anterior resection procedure was completed. The rectum specimen was taken out of the vagina. After the anastomosis, the vaginal cuff was closed. The patient had no postoperative morbidity and was discharged on the 4th day. The histopathologic stage of the lesion was reported as T1N1MO.

**Conclusion:** Robotic surgery is a feasible method especially in the pelvis and we think that removing the specimen by using the natural ways (NOSE) in eligible cases like our patient contributes to patient comfort.

**Keywords:** Robotic surgery, NOSE, low anterior resection

## VP-105 [Colon and Rectal Surgery]

# Transsacral Excision of Rectal Gastrointestinal Stromal Tumor

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**Introduction:** Gastrointestinal stromal tumors (GIST) are rarely seen in the rectum. Since lymphatic metastasis does not occur and it grows out of the lumen, total mesorectal excision is not necessary. With this video, we aimed to present the case in which transsacral (Kraske procedure) approach was applied because of the GIST located in distal rectum.

**Video Content:** In the rectal examination of the 54 year old male patient with rectal bleeding and difficulty in defecation, a mass with smooth surface and soft tissue located approximately 2 cm proximal to the anus was found and palpated. A 7x6x5 cm well-

circumscribed mass with a cystic and solid component growing towards the right pararectal area was reported in the pelvic MR examination. According to the result of transrectal biopsy performed with endoanal ultrasonography, it was reported as a GIST.

The patient underwent a mechanical bowel cleansing and an operation in prone jackknife position. Paracoccygeal incision was performed. The coccyx was removed, the anococcygeal ligament was incised and the fibers of the levator ani were eliminated by pushing them to both sides to reach the mass. With blunt and sharp dissections, the mass was liberated from the mesorectal tissues and the rectum was excised together with the posterior wall. The opening on the posterior wall of the rectum starting from the anal canal and continuing to 6 cm proximal was repaired by continuous suture technique. One drain was placed in the region and the muscular and subcutaneous tissue was closed in the anatomical plane. The patient was placed in the supine position and the operation was concluded with the laparoscopic loop ileostomy. The patient was discharged without any problems on the 5th postoperative day.

**Conclusion:** Distal rectal GISTs are usually appropriate lesions for the transsacral approach. This rather rare disease of the rectum requires that the Kraske procedure, an old surgical technique, should be remembered in practice in current colorectal surgery.

**Keywords:** GIST, rectum, kraske

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## VP-158 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Installation of Endoscopic Ultrasonography Unit in General Surgery Clinics and Its Contribution to Case Management

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**Introduction:** The aim of our study is to investigate the effect and contribution of endoscopic ultrasonography unit installation to treatment plan in general surgery clinics.

**Case:** Endoscopic ultrasonography (EUS) was developed in the 1980s for only imaging, and it was started to be used in fine needle aspiration biopsy with the development of the linear EUS scopes in the 1990s, and in the interventional and therapeutic procedures with the development of accessory devices. Two faculty members in our clinic received training on EUS and the unit started to be used in our hospital on Jan 03, 2018. EUS processor, echoendoscopes (radial, linear, rectal), miniprobe and echoendoscopy needles (19G - 22G - 25G) should be kept as basic equipment in the EUS room. We performed EUS in a total of 24 patients and FNAB in 7 of them. We performed cyst aspiration (inflammatory hC-amylase over 500) in 2 and pancreatic mass biopsy in 5 of these procedures. We made 6 choledocholithiasis and 2 chronic pancreatitis diagnoses. One biopsy result was reported as inadequate material, and pancreatic biopsy of 2 patients is still in process. Choledocholithiasis or mass resection that could not be performed in 3 patients was accomplished with EUS. The operability that could not be clarified by other imaging methods for 3 patients with pancreas ca prediagnosis was clarified by the detection of the invasion of portal vein and superior mesenteric artery on EUS. The stages of 2 papillary tumors were also clarified with EUS and treatment plans were changed.

**Conclusion:** We believe that the installation of EUS units is inevitable due to both the cancer staging procedure and the effectiveness of treatment algorithms.

**Keywords:** Endoscopy, endoscopic ultrasonography, EUS unit

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## VP-159 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# The Repair of Rectal Injury Caused by a Foreign Body with Endoclip in a Patient Admitted at the 72nd Hour

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Rectal injuries caused by foreign bodies are evaluated in a wide range of methods ranging from minimally invasive surgery to abdominal surgeries accompanied by stoma. If the patient is admitted to the hospital in the acute phase and there is no abscess accompanying the wound (first 6 hours), it is repaired by endoscopic methods. Our patient is a 17 year old male who was admitted to the hospital in the 72th hour after the incident; he was evaluated to have rectovesical fistula in the tomography, it was repaired with endoclip. A Foley catheter was applied to the patient for bladder injury and he was followed up for 7 days with clinical and laboratory findings and discharged after the procedure. The repair of delayed rectal injury with endoclip is the first case in the literature. This study was prepared to show that the patient can be treated with minimally invasive methods instead of a surgery with high morbidity and mortality.

**Keywords:** Rectal injury, foreign body, endoclip

## VP-161 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Gastrosopic Perforation of the Stomach, Case Report

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**Introduction:** Gastroscopy is a commonly used method in the diagnosis and treatment of upper gastrointestinal system diseases. Stomach perforations that occur during the procedure are very rare (0.03% -2%) but can lead to severe mortality and morbidity. In this study, it was aimed to present a case of gastric perforation during gastroscopy in a video.

**Case:** A 73-year-old male patient was admitted to our polyclinic with dyspeptic complaints that lasted for several months. Anamnesis indicated that the patient had advanced COPD. An iatrogenic gastric perforation about 6 cm in size extending along the small curvature of the stomach occurred during gastroscopy and it was tried to be repaired with endoscopic clips, but when the procedure failed, an emergency surgery decision was made. In the operation, a perforation focus extending from the incisura angularis to the cardia was detected. No contamination was detected in the abdomen. The primary repair was applied on the perforation focus with double layer suturing technique. The patient was followed up in ICU in the postoperative period. The patient with COPD exacerbation and *Acinetobacter baumannii* in tracheal aspirate culture during intensive care follow-ups died on the 5th postoperative day.

**Conclusion:** Diagnostic and therapeutic endoscopy is a commonly used method in gastrointestinal system diseases. Iatrogenic perforation is one of the rare but serious complications of endoscopy. Endoscopic perforations are less common in the stomach than in the colon due to the gastric compliance. Endoscopic treatments should be tried first when a perforation occurs. Iatrogenic perforations can be mortal especially in the people with comorbid diseases despite their low frequency.

**Keywords:** Endoscopic repair, gastroscopy, iatrogenic perforation, stomach perforation

## VP-162 [Gastrointestinal Surgery (esophagus, stomach, small bowel)]

# Atypical Massive GI Bleeding

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**Introduction:** Wegener's granulomatosis is a necrotizing granulomatous type vasculitis with indefinite cause that can usually occlude small or medium sized vessels as well as lead to systemic involvement. It can be seen in common vasculitis pictures including small arteries and veins. WG can occlude the upper and lower respiratory tracts, kidney and other organs. GI bleeding is rare. Urinal findings, nodules or infiltrations in the lungs, high sedimentation rate, unexplained anemia and c-ANCA positivity and the biopsies of the occluded organs can be required for definite diagnosis.

**Case:** A 43 year old female patient who was admitted to the nephrology polyclinic with the complaints of arthralgia, purpuric rash in knee, ankle and hip, extensive bullous lesion in mouth, fatigue and weight loss about 2 months ago was hospitalized with the prediagnosis of vasculitis. The patient underwent renal biopsy and he was diagnosed with WG and discharged after starting steroid therapy. Upon the complaints of acut epigastric pain, hemochezia or melena and deterioration in the general condition during the follow-up period, she was hospitalized and followed up in ICU. Upper and lower GI endoscopy, colonoscopy, angiography, and erythrocyte scintigraphy were performed for the bleeding focus, but no focus was detected. The patient was given 1000 mg methylprednisolone, 500 mg cyclophosphamide and 400 mg Mesna (detoxifacin) 2 times. Due to the impairment in her general situation despite plasmapheresis 3 times and 20 units of blood and blood product transfusion, she was referred to our clinic. The patient was followed up in a surgical intensive care unit. In the examinations performed (HbB 3.9), there was deep anemia, coagulation disorder due to massive blood transfusion. Consultation was requested from gastroenterology, hematology, and rheumatology clinics. Upper and lower GI endoscopy-colonoscopy was repeated. Intravenous immunoglobulin therapy was started. Upon the ongoing massive GI bleeding and worsening general condition, emergency exploration was performed. Approximately 500 cc hemorrhagic fluid in the abdomen was detected in the exploration. Entire colon and small intestines were explored, but no bleeding focus or area of necrosis was detected. In all segments of the small intestine, lesions in the cobblestone appearance were detected. Thereupon, preoperative colonoscopy was performed; subsequently, intraoperative ileoscopy-jejunoscopy was performed after performing a tomy in the proximal, approximately 20 cm from the cecum, and no active bleeding focus was detected. Ankaferd blood stopper was applied to the oozing style bleeding foci. It was detected that the mucosa and submucosa of the lesions in the small bowels disappeared, and only the serosal structures were normal. Since these lesions were available to be perforated, primary suture was performed, and an ileostomy was opened. On the 3rd postoperative day, a reoperation was performed because of the low hemoglobin level despite the massive blood transfusion. Necrotic areas were observed in the small bowels, and segmental resection with anastomosis was performed. The general condition of the patient

worsened in the postoperative period and she was connected to the mechanical ventilation. The patient was given a total of 35 ES 38 TDP blood transfusions. She died on the 7th postoperative day.

**Conclusion:** WG is a highly mortal disease that can also cause systemic involvement that can occlude the gastrointestinal system, and needs a multidisciplinary approach for its treatment.

**Keywords:** Wegener granulomatosis, massive GI bleeding, vasculitis

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## VP-228 [Hernia Surgery]

# Laparoscopic Transabdominal Preperitoneal Repair in Inguinal Hernia

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**Objective:** Inguinal hernias can be repaired with “onlay” or laparoscopic (IPOM) techniques, but due to the reasons such as recurrence and adhesion, preperitoneal “sublay” or “underlay” synthetic patch application can be preferred to intraperitoneal placement. Because of the technical difficulties, preperitoneal repair is not common in the world. There are no studies published yet about this application in Turkey. Our aim in this study is to investigate the feasibility and success of laparoscopic preperitoneal repair in the inguinal hernias.

**Material and Methods:** Six patients with different types of inguinal hernia problems underwent hernial repair with laparoscopic transabdominal preperitoneal synthetic patch between March and October 2017. The data collected prospectively from these patients were evaluated. In the preperitoneal repair, all abdominal adhesions were dissected with “harmonic” dissection after creating the conditions for standard laparoscopic hernia repair. Hernia contents were reduced. A curved incision was performed on the peritoneum towards the lateral and vertical side at least 5 cm away from the edge of the fascial defect. Preperitoneal dissection for paraumbilical hernias involves the risk of peritoneal perforation. For this reason, a retromuscular area was formed in front of the posterior rectus sheath in case of umbilical and paraumbilical hernia. Especially peritoneum and fat tissue are apparent in the superior and inferior of the paraumbilical area. For this reason, it is easy to create a preperitoneal area. Polypropylene mesh is fixed in this area and the peritoneum is closed.

**Results:** The mean age of 5 male and 1 female patients in whom repairs were performed was 50 (33-63). Hernia defects are located in the midline. Three umbilical, 2 midline incisional hernias and an epigastric hernia were repaired. The defect size is about 3.8 x 2.5 cm (2-5) and the patch size is about 12.5 x 12.17 cm<sup>2</sup> (12-15). The mean duration of operation is about 96.67 (70-140) minutes. Postoperative hospital stay is about 1.8 (1-3) days. Seroma occurred in two patients as a complication. The average follow-up period is 8.5 (6-13) months. There was no recurrence of hernia in the early follow-up period.

**Conclusion:** Laparoscopic inguinal hernia repair with preperitoneal patch minimizes the complications due to intraperitoneal placement of synthetic material. The mechanical advantages of the natural intra-abdominal pressure are utilized to keep the synthetic patch in the preperitoneum in place. Peritoneum prevents the formation of adhesions by forming a barrier between the patch and the bowels, and provides additional safety in keeping the patch in place. Laparoscopic preperitoneal inguinal hernia repair is a safe and feasible choice in experienced hands. Zero contact of the synthetic material with the abdominal organs and the use of laparoscopic technique ensure a safe and comfortable repair with low complication rates. Although this surgical approach has not become the gold standard yet, it ensures that the abdominal organs are not exposed to the mesh and adhesions. This method suggests innovative components of Laparoscopic comfort.

**Keywords:** Ventral hernia, laparoscopic preperitoneal repair

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## VP-229 [Hernia Surgery]

# Simultaneous Laparoscopic Orchiectomy and Tapp Repair in Adult Patient with Inguinal Hernia and Undescended Testicles; Video Presentation

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**Objective:** Approximately 7% of patients with inguinal hernia in childhood also experience undescended testicular problems. Although undescended testicles are rare in adulthood, its incidence along with inguinal hernia is reported as 0.7% in some stud-

ies in the literature. In this video presentation, we aimed to present the effectiveness of laparoscopic orchiectomy and hernia repair performed in a 26-year-old male patient with undescended right testis and inguinal hernia.

**Material and Methods:** After placing a 10-mm trocar in the right paramedian line and a 5-mm trocar in the left paramedian line, the peritoneum was liberated over the hernia line starting from 1 cm medial of the spina iliaca anterior superior to the medial umbilical ligament. After the lateral working space was created, the dissection of the space of Bogros in the medial was completed. Vas deferens and gonadal vascular structures were isolated after the hernia sac was released. The testis was taken into the abdomen and liberated from the surrounding tissues. Vas deferens, testicular vascular bundle and cord were ligated with Hem-O-Lock clips and the specimen was taken out through the 10-mm trocar site in the right paramedian. Subsequently, the hernia line was attached to the Cooper ligament first and then to the posterior abdominal wall by using prolene mesh graft and the operation was ended by closing the peritoneum.

**Conclusion:** We think that the laparoscopic orchiectomy and hernia repair offer better cosmetic results than the open surgery and can be performed safely in patients with undescended testis and inguinal hernia and with orchiectomy indications due to undescended testis.

**Keywords:** Inguinal Hernia, undescended testis, laparoscopic orchiectomy, tapp repair

## VP-230 [Hernia Surgery]

# Bilateral Inguinal Hernia Repair and Orchiectomy in Testicular Feminization

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**Introduction:** Testicular feminizing or, in other words, androgen insensitivity syndrome, is defined as the development of insensitivity to androgen receptors at a mutation ending in a gene linked to X, and as the appearance of a female phenotype in a 46 XY karyotype individual. It is a rare condition with an incidence of 1 in 20,000 births. The characteristic features of this disorder include normal breast development, lack or thinness of pubic and axillary hair, absence of uterus and fallopian tubes, a vagina with variable length, unusual external genitalia and the presence of testes usually located in the inguinal canal and producing androgen by age.

The diagnosis is usually made during the investigation of primary amenorrhea and infertility in the postpubertal period. In some patients, the diagnosis can be made upon the detection of testes in a female patient examined for inguinal hernia in older ages.

In this study, the findings related to a 63 year old woman who underwent bilateral laparoscopic inguinal hernia repair and orchiectomy due to testicular feminization in our clinic and the literature were reviewed.

**Case:** A 63-year-old female patient was admitted to our clinic with the complaints of pain and swelling in both groin and bilateral inguinal hernia, and bilateral testicular mass was detected on magnetic resonance imaging (MRI). The patient was a phenotypic female. It was learned that the married patient had no child. Bilateral inguinal hernia and bilateral testicular masses were detected on MRI applied to the patient without uterus and fallopian tubes. Laparoscopic bilateral extraperitoneal inguinal hernia repair and bilateral orchiectomy due to the possible risk of gonadal tumor development was planned for this patient.

**Video Content:** Bilateral indirect inguinal hernia, spermatic cord and testicular tissue were detected during laparoscopy process. Bilateral inguinal hernia repair was completed by using bipolar sealing system and prolene patch after bilateral orchiectomy. Pathological examinations confirmed that the excised tissues were testicular tissue but no tumor growth was detected.

**Conclusion:** Testicular feminization is a rare genetic disorder. There is a risk of tumor development in the testes, especially in the late diagnosed patients. The patients are recommended orchiectomy after the puberty period. It should be considered that testicular feminization can be encountered in the patients with inguinal hernia and infertility.

**Keywords:** Inguinal hernia, orchiectomy, testicular feminization

## VP-237 [Colon and Rectum Surgery]

# Robotic Mesocolic Excision for Transverse Colon

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**Introduction:** Because of the technical difficulties, transverse colon resections have been excluded in most of the publications that present the current advantages of laparoscopic colon surgeries compared to open surgery. The purpose of this presentation is to share a patient's video with a robotic transverse colon resection.

**Case:** On the colonoscopy performed for a 66 year old woman with the complaint of anemia, a mass involving a 3-4 cm segment in the transverse colon and covering 2/3 of the lumen was observed. The patient with adenocancer pathology was operated. The patient was placed in the supine and 30° reverse Trendelenburg position. One 12-mm robotic camera trocar, one 15-mm assistant port and three 8-mm robotic trocars were inserted into the abdomen. The dissection was initiated from the duodenum, and then the lesser sac was uncovered with Treitz ligament dissection. The middle colic artery and vein were dissected, ligated with Hem-o-lok clips and cut. Then, the mesocolic dissection was advanced from the bottom towards both flexures. After this procedure, the gastrocolic ligament was separated so that the omentum remains above. After mobilization of the hepatic and splenic flexures, colon transection was completed with linear stapler. The specimen was taken into the endobag. Anastomosis was completed manually using double layer 3-0 V-LoC. Pathology report; a 4-cm tumor, tumoral infiltration in the subserosa. Two free tumor deposits and 36 reactive lymph nodes were observed in the periclonic fat.

**Conclusion:** Transverse colon resection with robotic method can be performed effectively and safely.

**Keywords:** Transverse colon, mesocolic excision, robotic method

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## VP-240 [Endocrine Surgery]

# Transoral Endoscopic Thyroidectomy and Parathyroidectomy with Vestibular Approach, Video Presentation

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**Objective:** Thyroid and parathyroid surgery has been performed with transcervical incision described by Kocher since 1880. In recent years, in order to remove the surgical scar on the neck, many minimally invasive surgical techniques such as transaxillary, transareolar and transoral approaches have been performed. In this video presentation, we aimed to present the efficacy and safety of transoral endoscopic thyroidectomy and parathyroidectomy.

**Material and Methods:** The operation begins in the oral vestibulum with a 1-cm incision performed in the lower part of the lower lip and in the midline following the subplatysmal hydrodissection. Carbon dioxide insufflation is performed with 6 mmHg pressure through the 10-mm trocar placed in this incision. After placing two lateral 5-mm trocars, a subplatysmal working space is created by using L-hooks, energy devices and conventional laparoscopic hand tools. The operation is continued with the opening of the strep muscles as in conventional thyroidectomy. After reaching the thyroid region, unlike classic thyroidectomy, isthmectomy is performed first. The specimen is also taken out through the transoral route with the help of endobag.

**Conclusion:** No visible scar occurs in transoral endoscopic thyroid and parathyroid surgery. This technique also allows access to both lobes of the thyroid gland without a separate incision, unlike other minimally invasive methods. Transoral endoscopic approach can be reliably performed in selected patients and provides better cosmetic results.

**Keywords:** Transoral, endoscopy, thyroidectomy, parathyroidectomy

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## VP-241 [Endocrine Surgery]

# Laparoscopic Cyst Excision in an Aortocaval Paraganglioma Case

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Paragangliomas are neuroendocrine tumors arising from neural crest cells. They may arise in different localizations such as abdomen, thorax and neck with different findings. Retroperitoneal paragangliomas are very rare. The risk of complications due to the surgical treatment in the cases with critical involvement increases, although they are usually benign tumors. Especially in the cases with aortocaval involvement, both the risk of vascular injury and the adrenergic hormone discharge due to further manipulation of the mass increase the risks of surgical complications and hypertensive crisis at the same time.

The exact treatment of the paragangliomas is complete surgical excision. Surgical methods vary according to the localization and size of the mass. The primary goal in the surgical treatment is complete excision with as little manipulation as possible. In the cases with abdominal involvement, laparoscopic surgery can provide a better field of vision, safer dissection plan, and minimize the manipulation on the mass. In the 24 hour urine of a 38 year old patient who had been examined upon the complaints of oc-



casional headache, palpitations, sweating for about 5 years was diagnosed with hypertension, and the levels of catecholamines and metabolites were high. On the imaging with prediagnosis of pheochromocytoma, a 5-cm solid mass lesion with aortocaval involvement and increased vascularity was detected in the retroperitoneal space. Upon the diagnosis of paraganglioma, alpha blockage therapy was initiated and blood pressure was controlled. The localization of the mass was quite difficult in terms of the opening and the laparoscopic surgery. However, the large and hormonogenic formation of the mass was increasing the risk of hypertensive crisis due to the manipulation during the operation despite the alpha blockade. For this reason, we agreed on the laparoscopic intervention for the patient. However, atypical location of the mass posed a problem in terms of the patient positioning, dissection planning and navigation. In order to overcome these difficulties; after performing 3D reconstruction and contrasted abdominal CT of the patient; the mapping, patient positioning and dissection plan were prepared thanks to the PVC print of the mass and the aortocaval place. The patient underwent a laparoscopic excision of paraganglioma. The surgery was completed without complications. On the 3rd postoperative day, the patient was discharged without any problems. Laparoscopic excision can be preferred in selected cases because of better visual field in benign paraganglioma cases, less risk of hypertensive crisis with less manipulation and lower incidence of postoperative complications due to smaller incision.

**Keywords:** Aortocaval paraganglioma, laparoscopic excision, retroperitoneal paraganglioma

## VP-247 [Hernia Surgery]

# Combined Laparoscopic TAPP and IPOM-Plus Techniques for Multiple Synchronous Hernia

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**Introduction:** It was aimed to present the combined TAPP and IPOM-plus techniques for recurrent left inguinal, ipsilateral femoral and obturator hernia, epigastric and recurrent umbilical hernia in a female patient.

**Video Content:** The 45-year-old female patient was hospitalized with the diagnosis of recurrent inguinal hernia, umbilical hernia, and epigastric hernia. It was found out from the patient's history that she had left inguinal hernia 9 years ago, cesarean 6 years ago, umbilical and recurrent left inguinal hernia surgery 1 year ago. In the operation under general anesthesia, the abdomen was entered with a trocar through the umbilical fascial defect. The preperitoneal area was disrupted. Hernia incision was peritonealized. The round ligament was excised. Femoral and obturator hernia were detected in the explorization. The polypropylene mesh was fixed. The peritoneum was closed with absorbable tacker. Umbilical trocars were removed and the fascial defect was closed. Additional trocars were inserted from the right. Falsiform ligament was dissected. The epigastric fascial defect was brought into view. The defect was closed with 3 extracorporeal polypropylene sutures by using endoclose. The defect was closed with 3 pairs of no 1 extracorporeal sutures by using endoclose. A 15x10 cm dual mesh was attached with 2 transabdominal sutures and absorbable tackers. The patient was discharged without any complication on the 2nd postoperative day. The patient was clinically asymptomatic at the end of 6-month follow-up.

**Conclusion:** Multiple synchronous hernias can be treated simultaneously by observing the entire peritoneal cavity with a laparoscope. In such cases, we think that different laparoscopic repair techniques can be applied together.

**Keywords:** Multiple synchronous hernia, TAPP, IPOM-Plus

## VP-248 [Endocrine Surgery]

# First Plica Prolene Mesh Application in Laparoscopic Total Extraperitoneal Hernia Repair

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Inguinal hernia repair is one of the most common surgeries performed by surgeons. E.Bassini described inguinal hernia repair technique which is known by its name in 1887. Since that time, approximately more than 70 inguinal hernia repair techniques have been defined due to the complications and recurrence rates in inguinal hernia repairs. Considering the chronological order, the most commonly used and applicable scientific techniques today are as follows; Shouldice in repair with suture, lichtenstein in repair with anterior mesh, and tepp and tapp technique in laparoscopic repair. All these techniques have advantages as well as disadvantages. The expectations in the technique used in contemporary inguinal hernia repair are minimally invasive technique, low recurrence rate, short recovery period, less pain in the short and long term and low operation costs.

Detection of mesh in laparoscopic TEP repair in inguinal hernia is one of the biggest disputes. In the beginning, the fear for the laparoscopic inguinal hernia repair was the recurrence of the hernia. For this reason, the mesh was fixed in the preperitoneal area with a tucker. Soon afterwards, it was understood that these mesh fixings performed can cause nerve entrapments and chronic pains. Attentions have shifted to the incidence of chronic pain rather than recurrence with the reduction of the recurrence rate with the TEP method performed by detecting the mesh. Alternative methods such as different meshes and fibrin glue were used to reduce the incidence of this chronic pain. In these methods, either the mesh itself sticks to the wall of the abdomen or the fibrin glue is used for adhesion.

In this article, we aimed to present a more economical approach reducing both recurrence and post-operative pain by plicating the prolene mesh without using either special mesh or adhesive in TEP method.

**Keywords:** Laparoscopy, hernia, mesh plication

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## VP-249 [Endoscopy (Gastroscopy, Colonoscopy, ERCP)]

# Endoscopic Submucosal Dissection Experiences in Mucosal and Submucosal Lesions of the Stomach Using Synchronic Double Endoscope Technique

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**Objective:** Endoscopic submucosal dissection (ESD) is a minimally invasive procedure that can be effectively applied in the mucosal and submucosal lesions of the stomach and a popular procedure in recent years. Especially, in early stage gastric cancers (less than <2 cm, not invading the muscularis mucosa layer, T1a) it can be preferred. Since standard ESD requires one hand operation, the operation is difficult and long, and the complication rate is high. It requires an experienced and skilled endoscopist. It is possible to overcome these problems with the double endoscope method. Two endoscopes are inserted in at the same time in the double endoscope technique. While the lesion is elevated with one endoscope, the dissection is performed with another one. In this study, we aimed to introduce the technique performed in a patient who underwent ESD with double endoscope technique and to transfer our experience.

**Material and Methods:** We performed the process on 5 patients in total with this technique in the Surgical Endoscopy Service in our hospital between May 2017 and February 2018. The duration of the procedure was about 60 minutes. Bleeding occurred in two patients as a complication and it was stopped with a clip. A suspicion of perforation occurred in a patient and the suspected area was brought closer with clips.

**Video Content:** An intramuscular adenocarcinoma was detected in the stomach antrum on the gastroscopy applied for the 71 year old male patient with dyspeptic complaints. Then, the patient underwent EUS and it was decided that he was eligible for ESD. The patient underwent ESD by using the double endoscope method and the lesion was excised with clear surgical margins.

**Conclusion:** Double endoscope ESD is an expensive method because it requires double light source, double endoscope and double endoscopist. However, it is a more reliable, shorter and less complicated method than the standard ESD. Excision of the lesion with en-bloc and clean surgical margins is more effective. Because, since the traction is provided by one endoscopy, submucosal dissection can be performed easier. Therefore, double-endoscopic ESD is a more preferred method for mucosal and submucosal lesions of the stomach, especially for early gastric cancers.

**Keywords:** Dual endoscope, ESD, early stage gastric cancer

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## VP-295 [Hepatobiliary Surgery]

# Laparoscopic Approach in the Treatment of Pancreatic Pseudocyst: Case Report

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**Introduction:** Pancreatic pseudocysts are the lesions that are bordered by fibrous tissue containing necrotic debris and pancreatic fluid secretions but not a real epithelial tissue. Pancreatic pseudocysts can be seen in approximately 2-10% of acute pan-

creatitis cases and 10-30% of chronic pancreatitis cases. Large (> 6 cm) symptomatic pancreatic pseudocysts that do not regress in the interval period after the attack of acute chronic pancreatitis should be treated with various interventional methods. Minimally invasive methods are preferred more frequently according to the cystic site and its relation with the other internal organs due to the developing techniques. In this case, we share the application of laparoscopic cystogastrostomy for the treatment of pancreatic pseudocyst developing after acute pancreatitis.

**Case:** A 45 year old female patient was admitted to the hospital with acute biliary necrotizing pancreatitis. On the abdominal CT of the patient, there was an image compatible with necrosis areas at a rate of more than 50% in pancreatic corpus. The patient was followed up by medical treatment and discharged. During the follow-up visit, approximately 30 cm asymptomatic pseudocyst development was detected and followed up. During the follow-up period, decreased oral intake and complaints of nausea and vomiting developed. The abdominal CT applied in the 6th month of the follow-up revealed a 150x96 mm lesion and cholelithiasis compatible with pancreatic pseudocyst without septation in pancreatic corpus. It was seen that the cyst was pressuring the stomach and 1st part of the duodenum anteriorly. In addition, the splenic vein was also obliterated due to cystic pressure. Laparoscopic cystogastrostomy with anterior approach was decided for the patient who would undergo cholecystectomy. The 4-trocar method was used to enter the abdomen. The anterior wall of the stomach was opened through the antrum-corpus junction. The Veres needle was inserted into the cyst and after aspirating the cyst fluid, the stomach was opened through the posterior wall of the stomach and the cystic cavity was entered. Cystogastrostomy was performed with two 60-mm endoscopic staplers. Cyst contents and debris were evacuated. The front wall of the stomach was closed with two 60-mm staplers. Regular cholecystectomy was performed. On the 6th postoperative day, the patient was discharged without any problems. It was seen in the follow-ups that the cysts regressed.

**Conclusion:** Pancreatic pseudocysts are seen in acute and chronic pancreatitis and approximately 30-60% of them resolve and regress spontaneously in the follow-up period after attack. Approximately 10-30% of them require intervention. Percutaneous, endoscopic and surgical methods can be used in the treatment of pancreatic pseudocysts. Percutaneous drainage is not preferred because of the frequent occurrence of pancreatic fistulas. The rate of recurrence and the probability of complication are increased in endoscopic interventions performed on giant pseudocysts with necrosis greater than 50% and cyst greater than 15 cm. For this reason, if cholecystectomy is to be added to the procedure in these types of cysts, we believe that laparoscopic cystogastrostomy should be performed as the first step due to low complication and recurrence rate.

**Keywords:** Pancreas, pseudocyst, laparoscopic treatment

## VP-299 [Transplantation]

# The Evaluation of the Organs Sent from Other Centers in Cadaveric Organ Extraction

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**Objective:** The number of patients waiting for organs is increasing. About 35-40% of brain deaths in our country are used as organ donors. The cadaver donation rate in our country is 3-3.5 per million population. Organs are very valuable because of the limited number of cadavers and care should be taken for the extraction.

**Material and Methods:** Organs sent from the other centers to Antalya Medical Park Hospital Organ Transplantation Department between November 2016 and January 2018 were evaluated. During this period, 13 liver and 36 kidneys were sent to our center. The organs were evaluated in terms of PACKAGING, EXTRACTION, PERFUSION (GOOD-BAD). PACKAGING; direct contact of the organ with ice was evaluated as BAD.

EXTRACTION; the presence of superficial capsular laceration, parenchymal injuries, vascular injuries, portal vein thrombosis were evaluated as BAD for the liver (L). For the kidney; cutting the renal artery and vein 1-1.5 cm away from the hilus and cutting of the ureter from 4 cm were evaluated as BAD (Injuries that would not complicate the renal artery and venous anastomosis were not included in the study). PERFUSION; clotted blood from the veins when the organ was perfused again during the back table was considered as BAD.

**Results:** Packaging of 13 livers sent from other centers was evaluated as GOOD. The extraction of 4 of these livers were considered BAD. Four of them had 5x4 cm hepatic capsular defects. In 2 lungs, approximately 4x3 cm lacerations were detected and

a portal vein thrombosis occurred during the organ extraction in 1 of the same livers. The liver with thrombosis was not used. During the same period, 36 kidneys were sent from the other centers. PACKAGING of 3 of the kidneys sent was evaluated as BAD. There was ice around the kidney. The extraction of 7 kidneys were evaluated as BAD. Hilar injury in the renal artery and vein, dissection in the renal artery, dissection of the ureter from the renal pelvis, very short (1.5-2 cm) dissection of the renal arteries were the injuries we encountered. Perfusion of 6 kidneys having clotted-blood leakage from the renal veins was evaluated as BAD.

**Conclusion:** The number of cadaveric donors for organ transplantation is low and every stage of these operations requires attention. Every step from the extraction of the organs to the packaging requires attention.

**Keywords:** Cadaver, organ extraction, organ transplantation