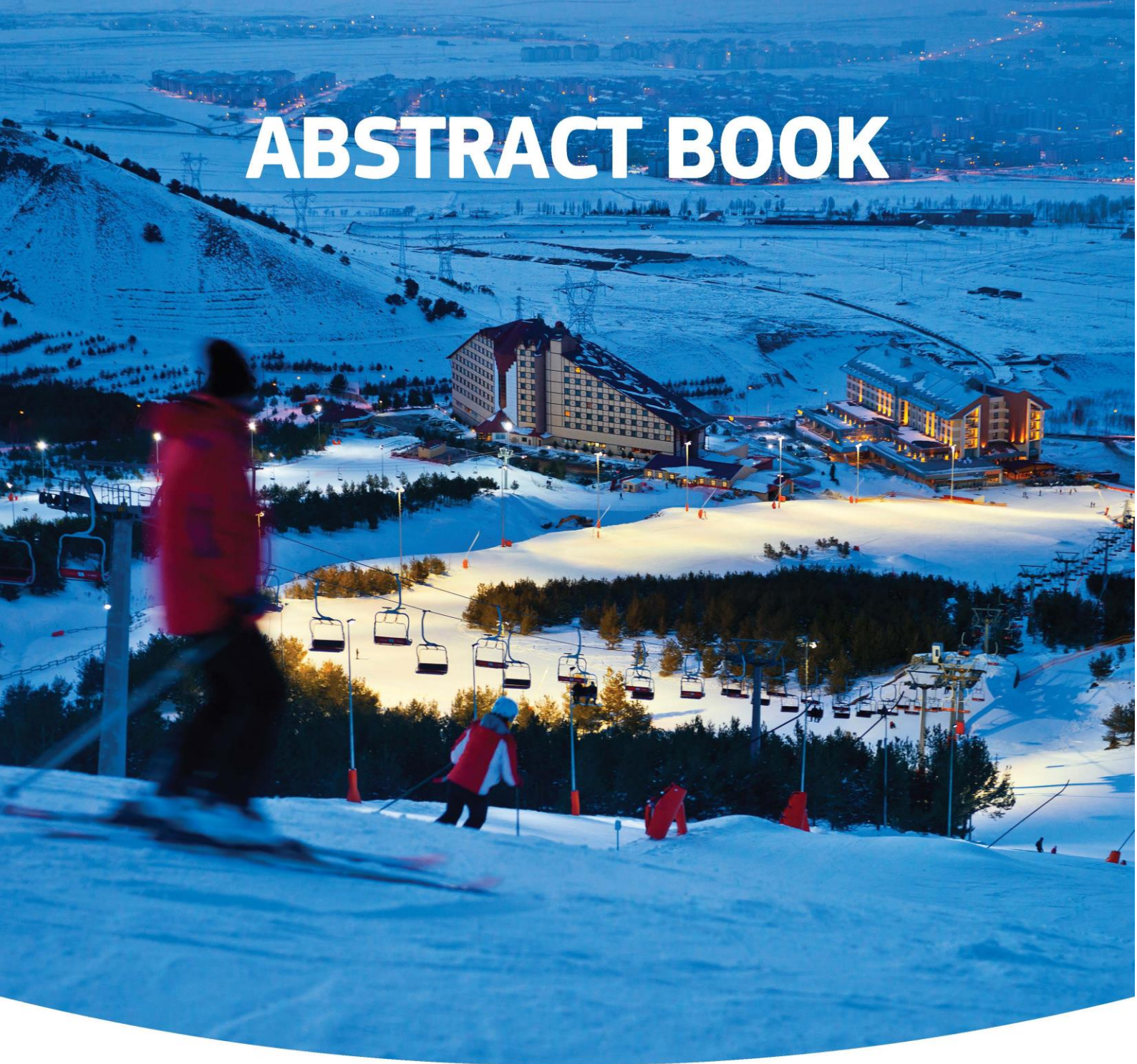
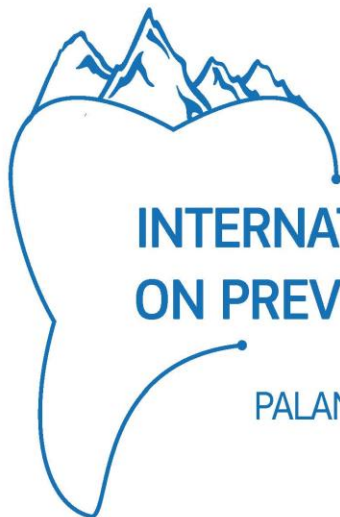


ABSTRACT BOOK



ATATÜRK
ÜNİVERSİTESİ



INTERNATIONAL CONGRESS
ON PREVENTIVE DENTISTRY
MARCH 5-8 2018
PALANDÖKEN, ERZURUM / TURKEY



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Muhammed Enes Naralan, Ozkan Miloglu, Binali Cakur

P - 0147 - Female and male temporomandibular joint patients martial status

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Selin Yeşiltepe, **Nebiha Hilal Bilge**, Fatma Çağlayan

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Mehmet Şerif Akdeniz, **İdris Kavut**, Mehmet Uğur



**ORAL PRESENTATION
ABSTRACTS**

The clinical use of fluorides for the prevention of dental caries in children

Jack Toumba

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The mainstay of preventive measures are the judicious use of fluoride (F), plaque control, fissure sealants and sensible dietary advice. It is the activity of the fluoride ion in the oral fluid that is of most importance in reducing the solubility of the enamel rather than a high content of fluoride in enamel. This is now the most widely accepted view of the role of fluoride in the prevention of dental caries. Fluoridated toothpastes have had the greatest impact on combating dental caries, which has declined dramatically since their introduction in the early 1970's. There are numerous different toothpaste formulations with differing fluoride concentrations for use by children and adults. Fluoride is also available clinically in tablets and drops, gels, rinses, varnishes and on a community level in water, salt and milk. Cochrane reviews have proven the clinical effectiveness of many clinical fluoride products. The latest fluoride research is investigating the use of slow-release devices for the long term intra-oral provision of fluoride. F over-dosage leads to acute and chronic toxicity. Today the use of fluoride dental products are as safe as can be and this presentation will discuss these issues and highlight the safe use of fluoride in Paediatric Dentistry.

Caries prevention beyond fluoride – biofilm control with pre- and probiotics

Svante Twetman

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Recent insights concerning the importance of a balanced and diverse microbiome in oral biofilms for the maintenance of health have brought a novel concept to dentistry; biofilm control rather than plaque eradication and restorative care. Therefore, the interest in using prebiotic agents and probiotic bacteria for the management of oral diseases has emerged in recent years, although the exact mechanisms of action are still unknown. The lecture will provide a brief background on the role of oral biofilms in health and disease and the potential role of prebiotics, such as arginine, and beneficial bacteria to prevent dysbiosis. The main vehicles for administration are toothpaste, dairy products or tablets/lozenges/drops. Clinical trials have shown that arginine can moderate the composition of the oral biofilm and boost the caries-preventive of fluoride in children and elderly. Systematic reviews have also displayed good evidence of an antagonistic role for probiotic lactobacilli and bifidobacteria against salivary mutans streptococci, while the effect on lesion development is controversial. Probiotic interventions early in life seem particularly promising since the timing and sequence of exposure to beneficial and harmless bacteria has a strong influence on the composition and development of the oral biofilm. Thus, based on 8 prospective trials, the preventive fraction for early childhood caries is calculated to 33%. Other trials have reported beneficial effects on gum health such as plaque index, bleeding on probing, pocket probing depth, subgingival microbiota, salivary IgA and pro-inflammatory cytokine levels in gingival crevicular fluid. Collectively, current research suggests a role of probiotic supplements as adjunct to the existing “best clinical practice”. No dramatic adverse effects have been reported but the optimal dose, timing and mode of delivery, remains to be established.

Correlation between dental caries experience and dietary habits in children

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Aim: Nutritional status is considered to be associated with the dental caries. However, the lack of knowledge about the dietary habits-caries relationship still needs addressing.

The purpose of this study was to compare the dietary patterns and oral hygiene habits with dental caries in healthy children.

Material-Methods: This study included 134 children (66 girls and 68 boys), aged 6-10 years (mean age, 8 ± 1.3 years) who were treated at Inonu University, Pediatric Dentistry Department. Their parents were asked to complete a questionnaire concerning their children's dietary habits, oral hygiene behaviors, and also food diaries for a week were collected from all the participants. Daily sugar intake was recorded using the food diaries and the subjects were grouped into excellent, good and watch out zone based upon the sugar sweet score. Additionally, clinical oral examinations of all the subjects were performed and dft/DMFT scores were calculated. The data obtained was analyzed using the chi-square test.

Results: According to the results of this study; boys had a significantly lower dft/DMFT index than girls ($p < 0.05$). The dft/DMFT index was not related to the frequency of tooth brushing and snack habits ($p > 0.05$). There was a positive correlation between dft/DMFT and watch out zone scores ($r = 0.188$, $p = 0.030$).

Conclusion: Since the prevalence of dental caries in children brushing their teeth regularly did not show a decrease, we can conclude that children cannot brush their teeth effectively by themselves. Dietary habits observed were associated with dft/DMFT index, highlighting a need for timely, multilevel intervention.

Keywords: caries risk, dental caries, dietary habits, snack habits

Teeth in Erzurum, Turkey

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Aim: The aim of this study is to determine the knowledge and awareness levels of the parents from different socioeconomic classes, about the necessity of the treatments which will be applied to children's primary teeth.

Material-Methods: The study was carried out in Atatürk University Department of Pediatric Dentistry. The sample framework of this study includes the parents of children between the ages of 1 and 12. We conducted a face-to-face survey with 228 parents (127 female, 101 male). In the questionnaire, the parents were asked some questions about the treatments of the primary teeth. SPSS 20.0 software was used for data analysis.

Results: The question of "Do the primary teeth need filling?" was answered by the participants as; "Yes" 66.2%, "No" 15.4%, and "I don't know" 18.4%. The Parents answered the question of "Is it possible to apply fissure sealants in primary teeth?" with; "Yes" as 35.1%, "No" as %12.7, and "I don't know" as %52.2. And they answered; 52.2% "Yes", 17.1% "No", and 30.7% "I don't know" to "Is the premature extraction of primary teeth harmful" question. Generally, parents' correct answers to all questions varied as $44.8 \pm 15.2\%$. No significant difference has been found between the socioeconomic status, age, and gender with correct answers.

Conclusions: We found that parents with different socio-economic status had moderate knowledge and awareness about the necessity of the treatment of primary teeth.

Keywords: Knowledge and Awareness, Primary Teeth, Survey study

Assessment of parents' knowledge and attitudes about artificial additives in toothpaste and brushing / Survey Study

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Aim: Parents knowledge is an important factor in giving children the information and encouragement needed for oral health. Perception of parents about their children's dental -care leading oral health-related behavior of the children.

The aim of this study is to determine whether there are relationships between oral health-related knowledge, attitude and behavior of children and their parents. An additional aim is to evaluate the knowledge of parents about artificial additives in toothpaste and their effects.

MATERIAL&METHODS: The study protocol was approved by the Ethics Committee of Clinical Investigations of the Istanbul University Dentistry Faculty. The participants were the parents of 137 children aged between 2-14 years who were reported for dental treatment in the Department of Pedodontics Dentistry, İstanbul University Faculty of Dentistry. The questionnaire was designed to evaluate the parents' level of knowledge about toothpaste content, knowledge and attitudes about brushing, socio-demographic characteristics of the family, and the survey was conducted face-to-face. Statistical evaluation was performed by means of IBM SPSS Statistics 22 (IBM SPSS, Turkey) program for comparison of the findings. The evaluation of the collected data from the studies was performed with descriptive statistical methods (frequency), as chi-square method was used for the comparison at $p < 0.05$ significance level.

Results: As the level of education of the individual increases, the level of knowledge about toothpaste-contents and the fluoride have also been observed to increase. ($p < 0.001$; $p < 0.05$)

Conclusion: Parents' knowledge, attitudes, and behaviors on oral and dental health are very important to get the habit and orient children in early childhood.

Keywords: parents knowledge, toothpaste, artificial additives

Investigation the level of knowledge of the community about oral and dental health

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Aim: The aim of this study is to determine the knowledges and approaches of the participants about oral and dental health.

Materials-Methods: The study was a questionnaire based cross-sectional survey. Participants were randomly selected among the individuals who volunteered to participate in the study. Participants were asked to answer a total of 22 questions, including sub-groups. Participants' demographic characteristics, toothbrushing habits, toothpaste selection and reasons for visiting the dentist were examined in this study. Participants' knowledge levels of fluoride and their attitudes towards the most common fluoride applications among preventive treatments were also evaluated. Data entry and analyses were performed using SPSS statistical software. Descriptive and inferential statistics and Chi-square test were used for analyzes.

Results: A total of 2744 voluntary participants including 1938 (70.6%) female and 806 (29.4%) male responded. 1391 (50.7 %) participants know the contents of their toothpaste. 1680 (61.2%) participants point out that fluoride is effective in preventing caries. Female participants reported a statistically significant difference in their knowledge of what is fluoride when compared to male participants ($p= 0.0001$). The knowledge level of participants who had higher levels of education were statistically significantly different when compared with the participants who had lower education levels about fluoride and fluoride applications ($p=0.0001$).

Conclusions: The results of this study indicate that participants' attitudes toward oral health and dental care need to be improved. Comprehensive oral health educational programs for both children and their parents are required to achieve this goal.

Keywords: oral health, fluoride applications, prevention, survey, parents' attitudes and knowledge

The association between dental caries and oxidative stress parameters in children

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Aim: The present study aimed to investigate the association between dental caries and oxidative stress parameters in children by measuring the levels of salivary pH, flow rate, total protein concentration, total antioxidant capacity (TAC) and total oxidant capacity (TOC) in serum and saliva samples, before and after the performance of dental treatment.

Material-Methods: Thirty-eight healthy children (3-6 years) who were treated under general anesthesia were participated in this study. The blood samples and unstimulated whole saliva were collected, one week before and after the dental treatments were performed. Salivary pH and flow rate, the total protein concentrations were determined in saliva samples. Then TAC and TOC levels were measured in saliva and serum samples. Statistical analysis was performed using a software program IBM SPSS Statistics 22 ($p < 0.05$).

Results: The difference between pre-treatment and post-treatment salivary pH levels was not significant. But the total protein concentrations and TOC levels showed a significant decrease in the post-treatment samples, meanwhile salivary flow rate and TAC levels had an increase in the post-treatment samples. A positive correlation was also found between the pre-treatment and post-treatment TAC and TOC levels obtained from serum and saliva samples.

Conclusion: The levels of oxidative stress parameters in saliva can be suggested as a tool for screening and monitoring dental caries. But further investigations conducted with a larger number of subjects should be performed to validate the role of oxidative stress in caries activity and to develop novel therapies for prevention and/or treatment modalities of dental caries.

Keywords: children, dental caries, oxidative stress parameters, saliva, serum

In Vitro Evaluation of Different Caries Detection Methods for Detection of Occlusal Caries Lesions in Primary and Permanent Teeth

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Aim: The aim of this in vitro study was to evaluate the performance of the ICDAS-II, radiographic examination, CarieScan PRO, DIAGNOdent Pen and DIAGNOcam methods in detecting occlusal caries lesions.

Material-Methods: 120 extracted primary and 120 extracted permanent teeth were used. Teeth were evaluated by two different examiners using caries diagnosis methods. Each tooth was sectioned and the size of the caries was assessed by a stereomicroscope. The diagnostic methods were evaluated using ROC analysis method for D1, D2 and D3 thresholds and Kappa analysis were used to assess interexaminer agreement.

Results: For the D1 threshold the area under the ROC curve (AUC) values were higher for DIAGNOcam method for both primary and permanent teeth (0.804 0.968, respectively). For both primary and permanent teeth, the highest AUC values for D2 threshold was found for ICDAS-II (0.774 and 0.731, respectively) and DIAGNOcam (0.775 and 0.731, respectively) methods and was statistically significantly different from the other methods ($p < 0.05$). For the D3 threshold, the highest AUC values were obtained with the DIAGNOcam method for permanent teeth (0.708) and with DIAGNOdent Pen method for primary teeth (0.789).

Between examiners, the very good agreement was found for the DIAGNOdent Pen method in the primary teeth ($\kappa=0.89$), and good agreement was found for the DIAGNOcam method in the permanent teeth ($\kappa=0.68$). The kappa values were moderate for all other methods (0.41-0.57).

Conclusion: As an aid to the visual examination, DIAGNOdent Pen and DIAGNOcam methods can be used instead of radiographic examination to limit x-ray exposure.

Keywords: Caries diagnosis methods, Kappa analysis, Occlusal caries, ROC analysis

Caries Assessment Spectrum and Treatment (CAST) Index in a Group of MIH-Affected Turkish Children

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Aim: Molar-incisor hypomineralisation (MIH) is defined as a qualitative enamel defect that involves hypomineralisation of one to four first permanent molars and is frequently associated with similarly affected permanent incisors (Weerheijm et al.). The aim of this study was to evaluate the caries experience of a group of Turkish children with MIH using a new caries assessment system, the Caries Assessment Spectrum and Treatment (CAST) index.

Material-Methods: A cross-section study was designed in which 103 children aged between 6 and 12 years with MIH from Department of Paediatric Dentistry, Dental School, Marmara University. Dental caries were assessed using the CAST criteria in primary dentition, permanent dentition and MIH-affected dentition (1st permanent molars and incisors) separately.

Results: This study involved 103 children. Considering primary dentition, teeth presented a prevalence of 51% for the healthy; 3,9% for the reversible premorbidity stage; 37,7% for the serious morbidity stage and 7,3% for the mortality. In permanent dentition; teeth presented a prevalence of 47% for the healthy; 31,8% for the reversible premorbidity stage; 20,4% for the serious morbidity stage and 0,8% for the mortality.

Conclusions: The Turkish children who had MIH showed that while healthy dentition and serious morbidity stage were more common in primary dentition; healthy dentition and reversible premorbidity stage were more common in permanent dentition. Also, The CAST index was a useful tool for the epidemiological studies of MIH-affected children.

Keywords: CAST, epidemiological, index, molar-incisor hypomineralization

The prevalence and severity of early childhood caries among children living in the northwestern region of Turkey

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Aim: Early childhood caries (ECC) is a severe form of dental caries, which is described as the presence of one or more missing teeth (due to caries), and/or decayed (noncavitated or filled) tooth surfaces in any tooth under the age of six years old. The aim of this study was to investigate the prevalence and severity of ECC among 3-5-years old children living in the northwestern region of Turkey.

Materials and Methods-: This study consisted of 474 children aged 3-5 years. The gender and age of the child, decayed, filled and missed teeth (DMFT index) were recorded. The severity of ECC was determined. Data were statistically analyzed by using One Way ANOVA and Chi-Square Tests.

Results: Considering the oral health status of all children, 15.2% of children were caries-free, whereas 36.7% of them were ECC, and 48,1% of them were Severe ECC (sECC) ($p < 0.05$). In terms of age, mean DMFT scores were 2.3 ± 1.9 , 4.7 ± 2.3 , and 5.7 ± 2.03 for 3, 4 and 5 ages, respectively ($p = 0.000$). Mean DMFT scores were of sECC children was 6.53 ± 1.3 . In 4 and 5 age groups, children with SECC had the highest rate (53,6% and 58,1%, respectively), whereas it was the lowest rate (25%) in the age of 3 ($p = 0.000$).

Conclusion: The present study demonstrates high caries prevalence in 3 to 5 year aged children in northwestern region of Turkey. Preventive programs should be developed and urgently implemented, in order to improve oral health, thus improving the quality of life of these populations.

Keywords: Child, Early childhood caries, Oral health, Prevalence

Prevalence assessment of dental prophylaxis among the routine dental treatments carried out in the pediatric dentistry clinic

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Aim: The aim of this study is to determine the ratio of prophylactic applications to all dental treatments implemented for the 6-13 years-old children who presented with different complaints at the department of pediatric dentistry in Ataturk University, and to reveal the distribution of prophylactic procedures by years, and also to evaluate the effectiveness of a project conducted in 2012.

Material-Methods: This study includes two parts. In the first part, we compared the data obtained from the final report of the project "Dental prophylaxis clinic" to the post-2014 data taken from the dental practice software database, since we couldn't reach the 2011-13 period's data. In the second part, we evaluated the ratio of dental prophylactic applications for the 6-13 age group children to other treatments administered between 2014 and 2017. Obtained data were analyzed using SPSS 20.0.

Results: In the statistical analyses made in the first part, we found a statistically significant difference between the rates of prophylactic dental procedures implemented in pre and post-prophylaxis clinic periods. As for the second part, we determined that between 2014 and 2017 53.5%, 56%, 55.7% and %61.7 fissure sealants have been applied by the years and also 14.3%, 15.9%, 12.4%, 11.1% fluoride application have been made respectively. We observed no statistically significant difference in the percentage of the children with the local fluoride placements.

Conclusion: Separating the prophylaxis and treatment clinics through the adaptation of "dental prophylaxis clinic project", contributed positively to the augmentation of the prophylactic procedures.

Keywords: Dental prophylaxis, Preventive dentistry, Fissure sealant, Fluoride application

Assessment of the 6-9 Years Old Children's Oral Hygiene Habits and Their Effects on DMFT of the First Permanent Molars

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Aim: The aim of this study is to determine the oral care habits of 6-9 years-old children, applied to the department of pediatric dentistry in 2017 and to investigate their effects on dental caries.

Materials-Methods: In this study, in order to determine the oral care habits of 90 6-9 years-old children with all permanent first molar teeth erupted, who applied to our clinic, we examined their tooth brushing and flossing, frequencies, topical fluoride application status and sugar consumption frequencies. Permanent first molar teeth were assessed for caries using a Diagnodent® pen device. Obtained data were analyzed using SPSS 20.0.

Results: Of the 90 children included in the study, 12% had been brushing their teeth twice a day, 28% once a day, and 60% were not regularly brushing their teeth. None of the patients were using dental floss. And 37% of the children had topical fluoride application methods. Also; we found that 14% consumed almost no sugar, 21% consumed less than once a day, and 64% consumed at least once a day. No significant difference was found between the tooth brushing frequencies, fluoride applications, sugar consumption frequencies and the number of carious permanent first molar teeth. Permanent first molar teeth DMFT value was 2.03 ± 1.48 .

Conclusions: In this study, we determined that the majority of the participants didn't provide adequate oral care and they consumed considerable amount of sugary food. However, it has been found that the oral care habits alone were not a strong determinant of dental caries formation.

Keywords: children, fluoride applications, permanent first molar teeth, tooth brushing frequency

Efficacy of Mineral Containing Novel Gel for Remineralization in ECC: 4-week Clinical Pilot Study

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Aim: This study evaluated the clinical efficacy of R.O.C.S.® Medical Minerals gel on remineralization of White Spot Lesion (WSL) in the enamel of primary teeth in young children

Material - Method: This clinical trial included 4-5 years old children (4.25 ± 0.25) who had at least one WSL on anterior teeth of upper or lower jaws. The patient was instructed to use R.O.C.S.® for two times per day for one month in order to obtain enamel remineralization. The efficacy of remineralizing agent on the remineralization of primary teeth was evaluated by DIAGNOdent laser fluorescence (LF) pen after 1 month of their use. Diagnodent values were tabulated and subjected to statistical analysis. The data were analyzed by using SPSS. Means and standard deviations for each group were used for descriptive statistics. Repeated Measures Analysis of Variance were used.

Results: Considering 36 lesions showed enamel alterations in all teeth. The mean of DIAGNOdent pen measurement at baseline was 14.98 ± 13.02 and 9.02 ± 8.11 after 1 months. R.O.C.S.® Medical Minerals gel for 1 months significantly decreased the severity of white or creamy opacities of lesions. ($p=0.018$). Twice daily use of R.O.C.S.® Medical Minerals gel had significant effect on remineralization of lower and upper primary teeth at 1 month of observation ($P<0.05$).

Conclusion: LF assessment suggested that mineral gel regimen could promote regression of WSL in primary teeth. The R.O.C.S.® Medical Minerals gel can be used for the remineralisation of non-cavitated white spot lesions for very young children.

Keywords: Remineralization, ECC, Mineral Gel

Preventive Orthodontic Treatment

Ahmad Hamdan

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Preventive orthodontic treatment is mainly carried out in the mixed dentition for functional, dental health and psychosocial reasons. Treatment is simple, of short duration and yields the maximum benefit to the patient. In many instances, such treatment can be carried out by the General Dental Practitioner with the supervision of an Orthodontist. This lecture will discuss the various malocclusions that would benefit from preventive (interceptive) orthodontic treatment and the supporting evidence for such treatment. A group of clinical cases where successful preventive orthodontic treatment has been carried out will be illustrated and discussed.

The Importance of Minimally Invasive Approaches in Restorative Dentistry

Zeynep Bilge KUTUK

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Minimal Invasive Dentistry (MID) is a philosophy that attempts to ensure that teeth are kept functional for life. Concept of MID has evolved as a consequence of increased understanding of the carious process in the prevention of its occurrence, inhibition of its progression and the development of newer adhesive restorative materials, which provide an alternative to mechanical retention. Much attention has been given in recent years to the need for clinicians to embrace minimally invasive and conservative techniques when providing patients with both necessary and elective dental treatments. However, much more than strictly limiting the amount of tooth structure that is removed during procedures, the concept of a minimalist approach to dentistry beckons clinicians to examine the patients thoroughly, review their conditions comprehensively, and consider their treatment alternatives critically. This is not to say that MID cannot be esthetic, durable, and predictably functional. On the contrary, practicing in an era when sound science and beautiful esthetics can be applied in a less technique-sensitive manner in a conservative and rewarding way is an answer to today's dental challenges.

Early Intervention for Prevention and Improving Oral Function

Timucin Arı

Chair, Division of Paediatric Dentistry & Undergraduate Orthodontics

The recommended time for a child's first dental visit should be no later than first year of life. Advances in understanding the factors affecting child development, especially early weeks of infant life suggests that first year dental check up may be too late for some babies. Problems such as breastfeeding, sleep apnea and early childhood caries have huge impact on babies and families. These problems can be managed through counseling, early intervention and working as a team with other health care providers. It is essential that pediatric dentists must be well acquainted with and capable of diagnosing all possible pathologies occurring during this early period of life. In my presentation, I will be talking about early interventions, mostly infant frenectomies and it's impact on feeding, oral function and prevention of dental disease.

Obstrüktif Uyku Apne Sendromunun (OSAS) Tedavisinde Dental Tedavi Yaklaşımları

Filiz Keyf

Hacettepe Üniversitesi Diş Hekimliği Fakültesi Protetik Diş Tedavisi Anabilim Dalı

Obstrüktif Uyku Apne Sendromunun (OSAS) tedavisinde ağız içi araçların (AİA) kullanılmasına ve tedavisinin etkinliğinin kanıtlanması nedeniyle apareylere olan ilgi son yıllarda artmış, mandibulanın ve dilin konumunu etkileyen apareyler tanıtılmaya ve kullanılmaya başlanmıştır. Bu apareylerin temel fonksiyonu dilin, farinksin arka duvarına yaklaşmasını ve obstrüksiyona neden olmasını engellemek, üst solunum yolu yapılarının pozisyonunu değiştirip havayolunu genişletmek, kas fonksiyonları üzerine etki ederek kasın direncini azaltmak ve böylece üst solunum yolunun daralmasına engel olmaktır. AİA tedavisi öncesi mutlaka polisomnografi (PSG) yapılmış olmalıdır. AİA tedavisinin uygun olup olmadığının değerlendirilmesi ve yapılması için ilgili tıp doktoru tarafından PSG'sinin rapor edildiği hasta, ilgili diş hekimine gönderilir. Bu aşamadan itibaren diş hekiminin tedavi için hastayı değerlendirmesi ve apareyin yapımına karar verilirse yani apareyin endikasyon ve konrendikasyonları, hangi tipinin kullanılacağı, çalışma modelinin hazırlanması ve protruziv kayıt alınması, apareyin yapılması ve takılması, hastanın kontrolleri, iyileşmenin takibi, yan etkileri anlatılacak, vakalar paylaşılacaktır. İskeletsel sorunlara bağlı OSAS için tedavi seçenekleri, farklı dental tedavi yaklaşımları nelerdir anlatılacak, yeni apareyler tanıtılacaktır.

Preventive planning for long term stability in esthetic implantology

Yeliz Çavuşođlu

Dental Assistant Program at Acibadem University in Istanbul

Aesthetics in dentistry as considered to be a dilemma for many reasons. The leading difficulty is that having consensus or evidence based results are as the main results are based on experts experience and patients satisfaction. In this perspective implant restorations on aesthetic area are restored with same principals coming from tooth born restorations. There are numerous modifications to be considered when it is to be an implant restoration. Starting from surgery, peri-implant tissues and prosthetic steps ; all stages are advised to be modified at the treatment planing session.

Implant dentistry has changed trough years of history and following case series will show how these changes reflected in our clinical bases.

Reading patient expectations takes the priority in aesthetic implantology. In order to achieve aesthetics in implantology bone and soft tissues must be considered with same importance as prosthetics. As a result, thinking in 3-D will improve outcomes of the restorations.

Non invazive treatment plan for children with MIH

Başak Durmuş

Marmara Üniversitesi Dişhekimliği Fakültesi Pedodonti AD

Distinct from other developmental defects of enamel, MIH presents with demarcated, qualitative defects of enamel, atypical cavities and post eruptive breakdowns of systemic origin affecting one or more first permanent molars (FPMs) with or without incisor involvement. In children with MIH, daily life is negatively affected by the pain and tenderness of the permanent first molar teeth. Especially frequent failures of the restorations at molar teeth and frequent dental appointments causing anxiety in children. The problem is mainly aesthetic and sensitivity in the affected anterior teeth. Early diagnosis of MIH is important because when parents are informed about its clinical situations and preventive care is implemented in a timely manner the teeth with MIH are kept in the mouth for a longer time. Therefore, in the content of the presentation; possible methods of reducing the need for restorative treatment, treatment of opacities in the anterior teeth, selective caries removal and self adhesive restoration applications will be discussed.

Evaluation of the effects of different remineralising agents on streptococcus mutans biofilm adhesion

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Aim: The aim of the study was to compare the effects of different remineralization methods that are well established in clinical and daily use on *S.mutans* biofilm formation.

Materials-Methods: In this study 72 human third molars were used. From each tooth two pieces of 4 mm x 7 mm enamel blocks were acquired. The samples were buried in acrylic resin, as enamel surfaces remaining on the top and sterilized by autoclaving for 15 min at 121°C and then divided into 6 groups in which include 10 samples per time period (24h and 48h) and for each remineralization method; Group 1: Control, Group 2: Flouride, Group 3: Ozone, Group 4: CPP-ACP, Group 5: Arginine, Group 6: Novamin. After remineralization procedures, enamel surfaces were covered with saliva and samples were incubated at 37°C for 60 min. 10⁵ CFU/mL of the active *S.mutans* culture were inoculated onto the samples. *S.mutans* colonies were counted with Plate Count Agar (PCA) decimal dilution method. Micromorphologic effects of different remineralization methods on *S. mutans* biofilm were observed by Scanning Electron Microscopy (SEM).

Results: The most *S.mutans* biofilm formation for both time periods was observed in the control group whereas the least biofilm formation was found in the Arginine group. In the control group there was statistical difference between 24h and 48h ($p<0.005$) but in the other study groups there were no significant difference between the time periods ($p>0.05$).

Conclusion: Arginine containing remineralization agent was the most effective remineralization method on *S.mutans* biofilm formation.

Keywords: Biofilm, enamel, flouride, remineralising agents, s.mutans

Intrapulpal Thermal Effects of Er,Cr:YSGG Laser Irradiation on Primary Teeth For Caries Prevention

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Aim: Er,Cr:YSGG (2.78 µm) laser irradiation on human teeth has been suggested for prevention of enamel demineralization. Intrapulpal temperature increase during the irradiation is controversial. The aim of this in vitro study was to evaluate the temperature variation in the pulp chamber during irradiation with Er,Cr:YSGG laser on human primary teeth enamel at different energy densities.

Material & Methods: Sixty primary central incisors were separated from the roots and pulpal tissues were removed. Obtained crowns were randomly divided into 3 groups (n=20). Labial surfaces of the teeth in each group were irradiated with Er,Cr:YSGG laser as following; Group I: 0.25 W, 20 Hz, Group II: 0.50 W, 20 Hz, Group III: 0.75 W, 20 Hz. During the enamel irradiation, a thermocouple and thermal conducting paste were placed inside the pulp chamber of the teeth and the temperature increases were recorded. The data were analyzed statistically using one-way ANOVA.

Results: Mean temperature values increased with increasing laser output levels (Group I<Group II<Group III). There were statistically significant differences between groups (p<0.05) and the highest values in temperature were observed with Group III (0.75 W, 20 Hz).

Conclusions: In conclusion, the temperature rise during Er,Cr:YSGG laser irradiation for prevention of primary enamel demineralization had a positive correlation with the laser output power level. Considering the increase in temperature, high output power levels should be used carefully on primary incisors.

Keywords: caries prevention, laser, pulpal temperature, primary teeth

The comparison of different fissure sealants on caries formation

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Aim: To compare different fissure sealants applied to erupting permanent first molar teeth on caries formation during 18 month follow-up period.

Materials & Methods: Two hundred children (105 girls-95 boys) who were between 5-8 years old, healthy, cooperative, who had no occlusion/bruxism problems, had at least one erupting [occlusal surface of tooth erupted completely, but more (S3) or less (S4) than half of buccal surface was covered by gingiva] permanent first molar tooth without caries and had primary second molar tooth next to the tooth to be applied fissure sealant were determined. Three different fissure sealants containing giomer (BeautiSealant), hydrophilic resin (Embrace WetBond) or traditional hydrophobic resin (Fissurit F) were applied randomly to permanent first molar teeth, and different fissure sealants were arranged to be in the mouth. Follow-up was done for 18 months with three monthly periods. Statistical analyzes were performed.

Results: Fissure sealants were applied to 683 permanent first molar teeth (325 maxillary-358 mandibular). At the end of 18 months, 7.6% of 390 teeth that could be followed regularly had new caries formation due to partial or complete loss. New caries formation rates were 10.6% for BeautiSealant, 4.3% for Embrace WetBond and 8.5% for Fissurit F. Difference between BeautiSealant and Embrace WetBond was statistically significant ($p < 0.05$). Compared to eruption stages, new caries formation was significantly higher in S4 (13.6%) than S3 (3.5%) ($p = 0.00$).

Conclusions: Properties of fissure sealants such as antibacterial, inhibition of bacterial adhesion, ion release, buffering capacity and application steps affected new caries formation. Patient's oral hygiene was also important.

Keywords: Caries, fissure sealant, oral hygiene

Investigation of bacterial flora in early childhood caries and caries-free children by quantitative PCR analysis

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Aim: Early childhood caries is one of the most prevalent chronic diseases in children that affect their life and their family in different aspects. This study is aimed to compare oral streptococci counts in early childhood caries and caries-free children by using PCR method.

Materials-Methods: 60 preschool children aged 2-6 participated in the study. 30 patient with ECC participated as the study group and 30 caries-free as the control group. Subjects were examined by a pediatric dentist using dmft/dmfs index. Plaque and saliva samples were collected from patients. Subtyping of *S. mutans* isolates was made by PCR using the gtfD, gtfT, gtfK, gtfP, gtfR and gtfG in *S. mutans* isolates isolated from patients in the study. In addition, in the study, subtypes identification was performed by RFLP method by cutting with the HaeIII restriction enzyme to determine the subtypes of *S. mutans* isolates in *S. mutans* strains by the RFLP method following the amplification of the gTFB gene. The data were analyzed using SPSS software.

Results: It was observed that the most isolated bacteria were found as *S. mutans* and *S. sanguinis* in ECC (%100; %60) and caries-free group (%100; %40).

Conclusion: The incidence of *S. sobrinus* was found to be higher in the study group (%20) compared to the control (%6.7) group. However, the presence of *S. sobrinus* with other bacteria was not found to be significant between caries formation and development ($p>0.05$).

Keywords: ECC, PCR, *S. sobrinus*, *S. Mutans*

Clinical success of fissure sealant materials used in initial caries lesions

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Aim: Clinical retention properties of sealants play an important role in inhibition of initial caries. The aim of this study was to assess the retention rates of fissure sealants used in management of initial caries lesions.

Material-Methods: The fissure sealants were applied randomly on 4 first permanent molars diagnosed by ICDAS II for scores 1-2 of 40 children aged 7-9, referred to the clinics of Dept.of Paediatric Dentistry, Istanbul University. The sealant materials were assigned to groups as follows; Group 1: a resin sealant with no fluoride (Helioseal, IvoclarVivadent, Germany), Group 2: a resin sealant with fluoride (Teethmate F1, Kuraray Co Ltd., Japan), Group 3: a sealant with amorphous calcium phosphate content (Aegis, Bosworth Co Ltd., Illinois, USA), Group 4: a pre-reacted glass ionomer (S-prg) sealant (Beautisealant, Shofu Inc, Japan). All sealant materials were applied according to manufacturers' instructions and assessed clinically at 3,6,12 months. The findings were analyzed by chi-square and Fisher's Exact tests.

Results: The total retention rates determined in groups at 3,6,12 months, respectively, were: Group1: 95%, 90%, 80%, Group2: 95%, 92.5%, 85%, Group3: 90%, 87.5%, 80%, Group 4: 87.5%, 77.5%, 62.5%. No significant differences ($p>0.05$) in retention rates between the periods of each group were found. All sealant materials showed similar retention rates ($p>0.05$) at 3 and 12 months; Group 4 showed less retention rates ($p<0.05$) compared to other groups at 6 months.

Conclusions: The findings of this study have demonstrated that sealant materials could be used in management of initial caries.

Keywords: Fissur sealent, ICDAS, permanent molar

Knowledge, Attitude and Practice of rural mothers about Oral and dental health of their children aged 1- 6 years

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Aim: One of the main criteria for measuring the health of people in the community is to evaluate their oral and dental health. The aim of this study was to assess the knowledge, attitudes and practices of rural mothers about oral and dental health of their children aged 1-6 years.

Material-Method: This study was a cross-sectional descriptive research conducted in the selected villages in the Southwest of Tabriz (Iran) in 2017. 90 mothers with the children aged 1-6 years, presented in the rural health centers were chosen. Easy sampling method with a three-part questionnaire (knowledge, attitude, and practice relatively) was used for data collecting. Data were analyzed using chi-square and variance analysis in SPSS 16.0.

Results: Mothers' knowledge levels were found as low (0-3), moderate (4-6) and high (7-10); 61.1%, 22.2% and 16.7% respectively. Negative (0-2), neutral (3-4) and positive (5-6) attitudes were observed as 4.4%, 22.2% and 73.4% respectively. Participants' levels of practice were observed as low (50%), moderate (27.7%) and high (22.3%). A significant relationship was observed between the mothers' knowledge and attitudes and their employment status ($P=0.005$ and $P = 0.001$ respectively). Working mothers had better practices towards the oral health of their children ($P = 0.001$). Education and economic status of mothers were also significantly related with their knowledge, attitude and practice on their children's oral and dental health.

Conclusion: Rural mother's knowledge, attitudes and practices were inadequate. Therefore, special training programs are required.

Keywords: Attitude, Knowledge, Mothers, One - six year old children, Oral and Dental health

Evaluation of the success of compomer restorations under general anesthesia after 12 month

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Aim: The aim of this study was to evaluate the clinical performance of compomer restorations under general anesthesia after 12-month. It was also aimed to see how patients carried out their oral care and dental controls recommended after dental treatments under general anesthesia.

Material & Methods: 476 compomer restorations of 94 healthy patient aged between 2-9 years (53 boys, 41 girls) who treated under general anesthesia at SDU, Faculty of Dentistry, Department of Pediatric Dentistry were evaluated. Clinical evaluations of restorations were done by using the Modified USPHS Criteria.

Results: In the study, 43% of the patients were in 2-5 and 57% in 6-9 age group. When restorations were evaluated according to arches, it was seen that teeth in upper arch had more restorations (62%). When restorations were assessed according to the teeth, it was observed that 67% of compomer restorations were composed of posterior teeth. In the cases of failure of compomer restorations, the first was secondary caries (23.9%) and the second was loss of retention (21.6%). It was found that teeth with secondary caries (25.5%) and those with loss of retention (22.7%) were more in lower arch. It was observed that only 35% of the patients came to dental controls after treatments. It was learned that only 24% of children brush their teeth regularly.

Conclusions: In this study, it was seen that one of four compomer restorations performed under general anesthesia was unsuccessful. It has been determined that three quarters of patients did not carry out oral care and the recommendations of dentists after treatments.

Keywords: Children, Compomer, General anesthesia, USPHS

Impact of comprehensive dental treatment under general anesthesia on oral health – related quality of life in preschool children

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Aim: General anesthesia is a commonly used method used in children who fail to respond to typical behavior management techniques. The outcome of dental rehabilitation under general anesthesia can be assessed by the children's oral health-related quality of life (OHRQoL). This study aimed to evaluate OHRQoL changes in preschool children after full mouth dental rehabilitation under general anesthesia.

Material-Methods: A total of 130 healthy children, 2 to 6 years of age, who received dental general anesthesia (DGA) at Adnan Menderes University Faculty of Dentistry during 2016-2017 were recruited. The study consisted of clinical dental examinations of patients and Early Childhood Impact Scale (ECOHIS) scores, completed by the parents/caregivers before and four weeks after treatment. Data were analyzed using the Wilcoxon signed-rank test, Mc-Nemar test, and independent samples t-test.

Results: The mean overall ECOHIS scores of the children were 19.3 ± 8.0 and 1.86 ± 2.1 before dental treatment and at follow-up respectively. The difference between the scores was statistically significant ($p < 0.001$). The overall ECOHIS scores decreased significantly ($p < 0.001$). The greatest decrease was for the domain of child psychology (96.5%) in the child impact section (CIS) and the domain of parental distress (97%) in the family impact section (FIS).

Conclusions: The OHRQoL scores of the preschool children who underwent comprehensive dental treatment were significantly improved after DGA. Additionally, the parents also experienced a positive impact from the improved OHRQoL of their children.

Keywords: Child, preschool, quality of life, pediatric dentistry

A retrospective comparison of tooth extraction under dental general anesthesia on healthy and handicapped children

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Aim: The aim of this study is to determine the properties of the tooth extraction performed on children under dental general anesthesia (inhalation with sevoflurane or intravenous medication) between the non-cooperate healthy and disable children.

Material & Metods: The records of patients between the ages of 3 and 18 who were treated under dental general anesthesia during a 1-year period (between January-December 2017) were evaluated. A retrospective study was carried out in 1189 patients, who consecutively attended the University of Süleyman Demirel Faculty of Dentistry Department of Oral and Maxillofacial Surgery. Patients were divided into two groups: disable and non-cooperate healthy children. The number of tooth extracted were evaluated for age, sex, dentition (primary or permanent) and disability.

Results: A total of 3448 tooth extractions from 1189 patients were included in the study. It was observed that 237 of 1189 patients were disabled and a total of 995 teeth were extracted from the disable children. It was also observed that tooth extraction was generally higher in disable children than healthy children (mean 4.2 for disabled children and 2.9 for healthy children).

Conclusions: The presented study showed that the number of teeth extracted under dental general anesthesia was higher in the disabled group. Therefore, especially more efforts should be necessary at encouraging these patients and their caregivers to visit the dentist early and routinely and receive primary preventive care.

Keywords: children, dental general anesthesia, disable, tooth extraction

Prevalence of Dental Anxiety in 7 to 15 Year Old Children and Its Relation with Parents' Anxiety

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Aim: The aims of this cross-sectional study were to evaluate the level of dental anxiety among schoolchildren and to compare children's dental anxiety to those of their parents.

Method: A cross-sectional survey was designed. A total of 304 parent-child pairs were recruited for the study. The children's age ranged from 7-15 years. Modified Dental Anxiety Scale (MDAS), Turkish version that categorizes the dental anxiety into five levels was used to evaluate dental anxiety among the parents. Demographic details such as age, educational level, and parents' occupational status was also collected. Therefore, before conducting a dental examination, each child was asked to independently complete a Children's Fear Survey Schedule – Dental Subscale (CFSS-DS) questionnaire. The data were analyzed using with chi square and pearson tests.

Results: Of the 304 children (176 girls, 128 boys) examined, dental anxiety was identified in 77 (%25.3) children (CFSS-DS \geq 38). There were no correlations between children's anxiety levels and their sex and age. All of the parents answered the questionnaire and 42 (%13.9) of them had anxiety problem. Parental MDAS scores had positive correlation with child dental anxiety measured with CFSS-DS ($r=0.410$, $p<0.05$).

Conclusion: These findings may help to devise interventions that will prevent or alleviate dental anxiety of children. Dental anxiety of children might be reduced or prevented by means of reducing parental dental anxiety.

Keywords: child, dental anxiety, prevalence

Nitric oxide and antioxidants in gingival crevicular fluid of primary teeth restored with compomer

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Aim: Nitric oxide (NO) and antioxidants are crucial molecules for homeostasis affecting the host immune response against the inflammatory conditions such as gingivitis, periodontitis and restorative materials on gingiva. We aimed to analyze NO, Total Antioxidant Status (TAS) and Total Oxidant Status (TOS) levels in gingival crevicular fluid (GCF) of maxillary primary canine teeth (MPCT) restored with Glasiosite (Voco, Cuxhaven, Germany).

Materials-Methods: 15 healthy children (5 female, 15 male) aged 5-8 not taking medication for one month participated in this study. While one of the MPCT had a subgingivally-located Class V cavity with 2mm-depth, the other MPCT was caries-free. Plaque index (Pi), gingival index (Gi), pocket probing depth (Pd) and bleeding index (Bi) scores were recorded after oral hygiene instructions. GCF was collected from each MPCT on the first day (T0), 7 (T1) and 21 (T2) days after the restoration of cavities, all the measurements were repeated. GCF volume, TAS, TOS and NO scores were evaluated. Data were transferred to the SPSS program; one-way ANOVA, post-hoc and paired sample t-test were used.

Results: When TAS, TOS and NO levels were the highest in T1 (respectively 0.19 ± 0.05 [mmol/L], 14.41 ± 1.48 [$\mu\text{mol/L}$], 4.52 ± 0.72 [$\mu\text{mol/dL}$]) ($p < 0.01$), the levels decreased gradually in the control group. The levels in the test group were statistically higher than the control group for all three-time periods ($p < 0.05$). The GCF volume, Pi and Gi scores in the test group decreased gradually. They were initially the highest ($p < 0.05$), though.

Conclusion: Restorations and oral hygiene instructions improved Pi and Gi scores. Several biological responses to both cervical caries and Class V restorations were observed in GCF. Additional studies using different restorative materials are needed.

Keywords: compomer, gingival crevicular fluid, nitric oxide

Do Previous Bad Dental Treatment Experiences Affect The Parents' Decisions About The Dental Treatment of Their Children?

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Aim: To evaluate the effects of adults' negative childhood dental experiences' on their lives and their thoughts about Protective Stabilization Technique (PST) used in dental treatments of the children under 3-years old.

Materials-Methods: A face-to-face survey was conducted among 200 adults (116 female, 84 male). In the first part of the survey, the participants' experiences and current fears were evaluated. In the second part, their opinions about deciding the way in which dental treatments should be performed were asked both subjects with and without children as if they had one.

Results: We found that; 14.5% of the participants had visited the dentist once in 6-month, 56.5% visited only if they had continuous dental pain, and 4.5% hadn't visited even if they had pain. As for the treatment with PST; 38% stated that it would affect the children's future life, 47% told that it won't affect if they don't feel pain, and 14.5% affirmed that they won't be negatively affected. There was no significant difference between the answers of the subjects with or without children ($P>0.05$).

Conclusion: Our society has some fears based on their previous experiences, which prevent them from having dental treatments. However, when deciding the dental treatment for their children, the parents tend to set their own fears aside and choose what is best for children.

Keywords: Dental experiences, Protective Stabilization Technique, Survey

Modulation of osteoclast behavior: Lessons from periodontal disease and tumour microenvironments.

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Bone-resorbing osteoclasts are multinucleated motile cells derived from haemopoietic stem cells during a multistep differentiation process. Bone marrow-derived osteoblastic stromal cells play an important role in modulating the differentiation of osteoclast progenitors by secreting soluble factors, and through signalling by cell-to-cell contact. This dogma has been now overwritten by numerous supporting cells that contribute several local factors as well as systemic hormones that support proliferation of osteoclast progenitors, differentiation into mature osteoclasts and promote their survival. Though once classified into three categories in terms of the signal transduction: vitamin D receptor-mediated signals [$1_{\alpha}\text{Phe},25(\text{OH})_2\text{D}_3$]; protein kinase A-mediated signals (PTH, PTHrP, PGE₂, and IL-1); and gp130-mediated signals (IL-6, IL-11, oncostatin M, and leukaemia inhibitory factor), now the list goes endless as new candidates such as tumour-secreted trophic factors, microbial-derived antigens and some immune cells, such as T-cells have been discovered to influence osteoclastogenesis. Majority of these osteoclast-inducing factors appear to act indirectly by inducing osteoblasts to secrete osteoclast differentiation factor (RANKL), which recognizes osteoclast progenitors and prepares them to differentiate into mature osteoclasts. But studies have shown that direct stimulation of osteoclast progenitors locally by cell-to-cell contact from tumour cells, microbial cell wall derived-antigens, can also trigger differentiation and bone destruction. As for tumour microenvironment, osteoclastic bone resorption promotes release of numerous growth factors (like TGF beta, FGF, IGF, PDGFs) from bone matrix which further stimulate tumour growth ensuing a vicious cycle of mutual dependency. And in the case of periodontal disease, inflammation and bone loss stand as hallmarks. Accumulated evidence demonstrates that periodontal disease involves microbially derived factors and antigens that stimulate local inflammatory reaction and activation of the innate immune system. Proinflammatory molecules and cytokine networks come into play where antigen stimulated lymphocytes (B- and T-cells) take the lead. These novel studies provide undoubtedly new ways to treat several metabolic bone diseases caused by abnormal osteoclast recruitment such as osteoporosis, osteopetrosis, cancer-induced osteolysis, Paget's disease, rheumatoid arthritis, and periodontal disease.

A New Anaesthesia Technique in Child Dentistry

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Anxiety and pain control in the treatment of pediatric patients is the first and most important condition of treatment success. Local anesthesia should be applied to the children before every dental procedure in which the child may have pain. Both the image of the needle and the medical experiences that have been experienced before, or whether the pain of the children under the consciousness creates a fear against the dentist. The most important factor that is frequently encountered in childhood and causes difficulties in the treatment is pain and needle phobia during local anesthesia procedures. One common cause of needle fears in adult patients is the negative dental treatment experience experienced during childhood.

It should be remembered that painless local anesthesia can be performed in childhood only if effective local anesthesia technique is applied successfully with effective psychological approach.

Traditional local anesthesia systems can cause dental anxiety in children. For this reason, parallel to technological developments, new needle-free and painless LA techniques are being developed. With the development of needle-free injection systems, the patient's needle phobia and dental anxiety are inhibited.

In this seminar, successful local anesthesia methods and a new needle-free local anesthesia technique will be discussed in children by the authors.

Saving the hopeless tooth

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Root canal treatment is a predictable procedure with high success rate. However, procedural problems such as ledge formation, transportation of the canal, root perforation and extrusion of the irrigants can affect the prognosis. In addition, post-treatment disease can be encountered even in teeth with high quality root canal treatment. When a previously root canal treated tooth fails or the final radiograph of the retreated tooth is not satisfactory, some practitioners are quick to call for extraction. Recently, the criteria used to assess success and failure have been changed. The term "success" can be defined as the retention and function of a symptom-free root canal treated tooth. In this lecture, follow-up of some tricky cases will be presented and discussed from another point of view.

Diagnosis And Examination Of Supernumerary Teeth Using Cone-Beam Computed Tomography

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Aim: The aim of this article is to evaluate the supernumerary teeth in 3D with the use of conical beam computerized tomography (CBCT).

Material & Methods: This study was conducted among 230 patients who have CBCT images and referred to Inonu University Faculty of Dentistry between 2011 and 2017. Among these patients, 100 patients with 130 supernumerary teeth between the ages of 5-15 were included in the study. The following records were evaluated in all patients: age, gender, associated local disorders, location in each jaw, shape, sagittal and transversal orientation of the supernumerary teeth. Skeletal structures are also evaluated. The data collected were statistically analyzed using SPSS Version 16 software (SPSS Inc, USA). Age was summarized as means and standard deviation and all other variables were calculated as frequencies and percentages. The prevalence among males and females was compared using Chi-square test ($P < 0.05$).

Results: In this study, 72% of the supernumeraries were related to local disorders. The most frequent local disorder was found to be the delayed eruption of the permanent teeth with a ratio of 43%, followed by diastema. Supernumeraries were most commonly conical in shape and most of them occurred in the premaxillary region.

Conclusions: The detailed evaluation of supernumerary teeth with CBCT will help the clinician to decide on the timing of supernumerary tooth extraction with minimal stress and risk for the children. In addition, three-dimensional images will clearly show the relationships between the supernumerary tooth and the surrounding tissues and will minimize the complications that may occur.

Keywords: Conical Beam Computerized Tomography (CBCT), Supernumerary Teeth, Children, Skeletal Structures

Primary teeth pulpectomy clinical and radiological success: A retrospective comparison of two techniques

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Aim: To assess the clinical and radiological outcomes of two pulpectomy techniques in primary molars using metronidazole canal dressing followed by Zinc Oxide Eugenol obturation (MZ) and Ca(OH)₂ dressing followed by Iodoform+ Ca(OH)₂ obturation (CaOH).

Material-Methods: Cases that had preoperative radiograph of pulpectomy in primary molars with history of fistula or swelling, tenderness to percussion, presence of abscess, excessive tooth mobility, roots at least two thirds intact, radiolucency in the bifurcation and/or periradicular and/or periapical area and that were treated using MZ or CaOH were included. The outcomes were categorized as successful if they had no symptoms of failure: pain, fistula, restoration failure, tenderness to percussion, abnormal radiolucency of the material, pathological root resorption, periapical radiolucency, premature root resorption and natural exfoliation up to 6- 36 months after treatment. Categorical data association was tested with Chi square test at p<0.05 significance. **Results:** Records of 60 subjects (28 boys, 32 girls; 85.40± 19.85 months old) were included in the study. Twenty-seven out of 35 MZ and 23 out of 32 CaOH were considered successful. Overall success and fail outcomes were not associated with treatment types (p= 0.780) or follow up duration (p6- 12 mo= 0.582, p12- 24mo= 0.272, p24-36 mo= 0.642). Pathological resorption (4/ 35, 2/32) and premature root resorption (4/35, 6/32) were the most common causes for failure in both groups.

Conclusions: Success rates of these two techniques were not different, prospective studies may be useful to compare more accurately.

Keywords: pulpectomy, zinc oxide eugenol, calcium hydroxide

Dental Occlusion Status of Preschool Children and Related Feeding And Some Non-Nutritive Sucking Habits, Turkey

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Aim: The aim of this study was to reveal the relationship between feeding and some non-nutritive sucking habits, and the dental occlusion status in preschool children.

Methods: The data was obtained from a broad descriptive study. Hacettepe University Non-Interventional Clinical Researches Ethics Board's approval was obtained. This report includes the descriptive analysis of some feeding characteristics and non-nutritive sucking habits, and dental occlusion status data of 36-71 months old 729 children in the capital city of Turkey. To evaluate the relations, Chi square and Mann Whitney U tests were used.

Results: Duration of breast-feeding were ≤ 6 months in 15.5%, 13-24 months in 52.2% and ≥ 24 months in 11.2% of the children. 71.9% were ever bottle-fed; 68.3% were bottle-fed at night. Two-fifth of the children were pacifier-sucking, 8.0% finger sucking, 24.0% nail biting and 9.7% had other sucking habits. According to analysis, the difference between the duration of breast-feeding with baby-bottle use and pacifier-sucking status were found statistically significant ($p < 0.001$). 4.3% of the children had anterior open-bite; it was statistically significantly higher in finger sucking children ($p < 0.001$), while there is no statistically significantly difference in occlusion status between ever bottle-fed or not. When occlusion was evaluated by sex, anterior malocclusion was significantly higher in females ($p = 0,037$),

Conclusion: Baby bottle and pacifier sucking were seen at a certainly level in these preschoolers. Habits may be related with malocclusions. More informing meetings about the effects of feeding and non-nutritive oral habits on oral health be recommended to pregnant women, mothers and preschool teachers.

Keywords: malocclusion, breast-feeding, bottle-feeding, sucking habits, pre-school

The effect of parents' sociodemographic status and oral health knowledge on children's oral health

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Aim

Parents play the biggest role in children's oral health, which is correlated with the awareness level of parents. This study aims to evaluate the knowledge of parents who have different sociodemographic status regarding their own and the young children's oral care.

Material & Methods

This study included 246 children aged 3-6 years (mean age: 4.47 ± 1.05 ; 128 girls(52%), 118 boys(48%)) and their parents (141 females(57.3%), 105 males(42.7%)). Parents completed a questionnaire about parents' and children's oral health. Clinical examinations of children were performed and dmft/dmfs scores were recorded. Data were transferred to the SPSS program and statistical analyzes were performed using the Chi square test.

Results

Sociodemographic differences didn't cause a statistically significant difference in children's dmft/dmfs scores ($p > 0.05$). Children's brushing habit, parental involvement in brushing, fluoride application to children didn't make a statistically significant difference in dmft/dmfs scores ($p > 0.05$). The age of children having the first toothbrush was 3.06 ± 1.27 , and the age to start brushing teeth was 3.23 ± 1.28 . The prevalence of parental involvement in children's tooth brushing decreased with the children's age. The prevalence of acceptable responses to the questions about parents' and children's oral care increased ($p < 0.05$) as parents' education level increased.

Conclusion

Although highly educated parents have acceptable levels of knowledge about oral health, this had no reflection on the children's dmft/dmfs scores. Likewise, children's tooth brushing habits and fluoride applications did not change dmft/dmfs scores positively. Parents should be motivated to transfer the theoretical knowledge into practice properly and educated with their children on effective toothbrushing.

Keywords: Children, oral health knowledge, parents, sociodemographic status

Investigation of Non-pharmacologic and Pharmacological Methods Applied in Tooth Eruption Process in Infants: A Systematic Review

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Aim: Eruption of tooth is a significant developmental marker for infants. The aim of this presentation is to describe the signs and symptoms frequently attributed to tooth eruption and management of teething problems by pharmacological and non-pharmacological methods.

Methods: Literature search was performed using PubMed/MEDLINE (through 2000) and restricted to the English language. In PubMed/MEDLINE search terms used were teething, non-pharmacologic methods, pharmacological methods.

Results: The reported symptoms were more frequent in the 8 day period which defined as "teething window". The teething signs were reported as irritability, drooling, coughing, chin rash, biting, cheek rubbing, ear pulling, appetite loss, sleep disturbances and cold like symptoms. The most frequent reported non-pharmacological methods were cuddle therapy, ice, rubbing the gums, teething rings and chewing cold foods. Pharmacological methods for teething generally include to achieve analgesia, anaesthesia, sedation or a combination of these. Parasetamol, ibuprofen, choline salicylate, lidocaine, benzocaine, complementary and alternative medicines reported as pharmacological methods.

Conclusions: The signs and symptoms in teething process may be really related with tooth eruption or associated with different diseases and conditions. The risks associated with inappropriate or prolonged use of pharmacological agents in pain management must be considered carefully. Parents should be informed by dentists about using pharmacologic and non-pharmacological methods to relieve teething symptoms.

Keywords: non-pharmacologic, pharmacological methods, teething

The relationship between weight, height, nutritional status and eruption times of permanent teeth of Turkish children aged 4-13 years

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Aim: The tooth eruption times (TETs) are important at the development of the child and also informs about permanent dental formation for diagnosis and treatment in pediatric dentistry. The aim of this study is to investigate the relationship between the emergence of permanent teeth and physical growth and nutritional status.

Material-Methods: One hundred forty-eight healthy children were evaluated with TETs, age, height and weight. The TETs were compared with the age, height and weight according to the sex. The relation of age, the TETs, height and weight were investigated. Statistical analysis was performed by Mann-Whitney U test and Spearman correlation analysis ($p < 0.05$). Mean and standard deviation were used for descriptive statistic.

Results: The average ages of children were $8,32 \pm 2,07$ years in boys and $8,25 \pm 2,28$ years in girl. The average TETs were earlier in boys (except for tooth #13, #14, #16, #17, #23, #24, #25, #27, #47), ($p > 0.05$). In partial correlation analysis, mean tooth eruption times were positively, and significantly associated with height while controlling for weight ($p < 0.05$), (except for tooth #17, #27, #47, ($p > 0.05$)). On the other hand, in partial correlation analysis, mean tooth eruption times were negatively, but not significantly associated with weight while controlling for height ($p > 0.05$). The height of the child was significantly correlated with mean eruption times in 57% of the teeth.

Conclusion: The weight of the child did not show any significant influence on the tooth eruption times while the influence of height on tooth eruption times was non-conclusive.

Keywords: Height, Permanent teeth, Tooth eruption time, Weight

Clinical status of maxillary central incisors in children aged from seven to twelve in Zonguldak, Turkey: a retrospective study

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Aim: The aim of this study was to evaluate the clinical status of maxillary central incisor teeth in children.

Methods-Materials: The study was performed by evaluating the clinical records of non-syndromic and healthy children, aged between 7 and 12 years, who attended to Bulent Ecevit University Faculty of Dentistry, for dental treatment between the years 2016 and 2017. Age, gender, clinical status of right and left maxillary central teeth were recorded for each patient, the results were statistically analyzed by using Chi-Square Test, and $p < 0.05$ was considered significant.

Results: In this study, 2185 children's (1122 females and 1063 males) records were evaluated. The mean age of the patients was 9.81 ± 1.75 . In both teeth, the status of sound had significantly ($p = 0.000$) the highest rate (85.4% for tooth 11, 86.2% for tooth 21), followed by the status of caries (7.1% for tooth 11 and 6.4% for tooth 21). In genders, the number of sound teeth was higher in females ($n = 2000$) than males ($n = 1749$), and the difference was statistically significant ($p = 0.000$). Similar significant result was obtained ($p = 0.004$) for caries, and it was most observed in the age group 12 (54,05%), and the difference with the other age groups was statistically significant ($p = 0.000$).

Conclusion: According to the results of the study, it may be considered that protection the health of maxillary central incisors becomes more difficult as the age increases, and this situation should be taken into account during the planning of oral health care programs.

Keywords: Pediatric dentistry, maxillary central incisors, oral health care

Prevalence of Molar-Incisor Malformation in Aydın

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Aim: Molar incisor malformation (MIM) is a newly described developmental tooth anomaly that affects the root morphology of primary second molars and permanent first molars along with the crown morphology of permanent maxillary central incisors. The aim of this study was to investigate the prevalence of Molar-Incisor Malformation (MIM) in clinics of Pediatric Dentistry, Adnan Menderes University Faculty of Dentistry.

Material & Methods: This retrospective study was based on evaluation of good quality digital panoramic radiographs of 9-14 years old children from December 2013-February 2016, who attended the dental clinics of Pediatric Dentistry, Adnan Menderes University Faculty of Dentistry. In all, 1677 patients with mixed to permanent dentition for regular oral and orthodontic check-ups were selected based on the presence of digital panoramic radiographs and medical records.

Results: A total of patients was 1677. 807 were boys, 870 were girls. Their age average was $11,43 \pm 1,57$. The overall prevalence of MIM was approximately 0.06% (1/1677), differences. The patient was girl and have a medical history. Also, some root malformations on permanent first molars detected in three patients. But their features did not describe MIM because of their incisors were not effected.

Conclusions: MIM was very rarely seen clinically. However, dentists should be alert to the characteristics of MIM, especially during the examination of children who have experienced a systemic disease.

Keywords: Molar-Incisor Malformation, Prevalence, Dental anomaly

Evaluation of Oral and Dental Health Awareness and Habits Between First and Second Year Dental Faculty Students

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Aim: Despite the fact that the education of dental faculty students takes their first year as preclinical lessons, they are expected to be knowledgeable about oral and dental health and apply them. In this study, it was aimed to evaluate oral dental health awareness and oral health habits of 1st and 2nd-year dental students.

Material-Method: A total of 127 people, including 1st and 2nd-year students at the faculty of dentistry were included in this study. In the study, a questionnaire including 39 questions about oral-dental habits and knowledge level was created. In the study, the results obtained from the questionnaire were analyzed with SPSS 22.0 version. The significance level was taken as 0.05. Chi-square and Mann-Whitney-U test were used for statistical analysis.

Results: As the frequency and duration of daily tooth brushing increases, bad breath and bleeding gums decrease and the rate of satisfaction with their own teeth increases. There was no significant difference between the 1st and 2nd classes in terms of the questions. All students answered these questions in such a way that they did not differ from each other under the same viewpoint ($p > 0.05$).

Conclusion: It was thought that the students had a homogeneous identity with each other because the vocational training had just begun and the clinical lessons haven't started yet. As class levels increase and clinical lessons begin, awareness and knowledge levels are expected to increase. For more precise results, it is considered to continue to work with more students.

Keywords: oral health awareness, dental habits, preclinical classes, dental faculty students

Dental Implant or Endodontic and Conservative Treatment?

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Introduction: Invasive cervical root resorption is an external tooth resorption which rarely occurs and develops without any symptoms in the cervical region of permanent teeth, and its etiology was not explained. Lesions were generally considered to be evaluated as internal resorption and dental decays and malpractices are performed due to wrong diagnosis.

Case Reports: In this case report, a 56-year-old male patient not presenting with any systemic disease and not smoking experienced a bicycle accident 30 years ago. Tooth coloring was detected on the left upper 1st tooth. He detected that this tooth was dangling three days ago, and he referred to our clinic due to gingival swelling. In the clinical and radiological examination, invasive cervical root resorption was detected on the associated tooth of the patient. Fractured crown was withdrawn, and antibiotic was prescribed for soft tissue infection. Endodontic treatment was applied to the root inside the mouth. Applying flap operation, root surface was reached, and present crown was implanted on the root exposed to fiber post. Fiber splint was applied to adjacent teeth.

Conclusion: A successful result was achieved with restorative treatment approach. We presented clinical and radiographic diagnosis, and nine month of follow up results of the tooth with invasive cervical resorption.

Keywords: Cervical Root Resorption, Dental Travma, Dentistry

A questionnaire study on materials and methods preferred for endodontic practice of dentist in TRNC

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Aim: The preference and usage of endodontic materials varies from individual to individual based on their technique, experience and the clinical situation. The aim of this study was to investigate the current opinions and preferred materials of the dentists in Turkish Republic of Northern Cyprus (TRNC) on the basic features of routine endodontic treatment.

Methods: The questionnaire was planned to be applied to all dentists who are actively working in the TRNC and registered in the Turkish Cypriot Dental Chamber. Both general dental practitioners and the dental specialists were included in the study. The questionnaire included questions about practitioners' attitudes towards endodontic procedures and the materials they use. It was implemented through face to face interviewing method by two researchers.

Results: 117 dentists responded to the survey, and 106 (90.6%) of them were applied endodontic treatments in their clinic. 54.7% of practitioners used NiTi-rotary files for root canal treatments, while 45.3% of them never used NiTi-rotary files. The most frequently used NiTi system was ProTaper Universal System with 70.7% value, while 51.7% of dentists were using wired-electrical endomotors. The most frequently used materials for obturation were gutta-percha with AH-Plus (37.7%), and gutta-percha with Endomethasone (35.8%). 7.6% of the respondents used warm gutta-percha obturation techniques.

Conclusion: Post-graduate endodontic programs should be considered and given importance in order to increase the current standards of the endodontic treatments in the TRNC.

Keywords: Endodontic Treatment, Materials, Questionnaire, Techniques

Fracture Resistance and Microleakage Analysis of Endocrown Restorations in Primary Molar Teeth

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Aim:

To evaluate fracture resistance and microleakage of direct and indirect composite endocrown restorations and class II composite restorations in primary molars

Materials-Methods:

72 extracted second primary molars were used for fracture resistance and microleakage evaluations. For each test, 36 teeth were divided into three groups: class II composite (control), direct composite endocrown and indirect composite endocrown. First and second groups were restored with G-aenial system® while the third group was restored with Gradia Indirect system®. After thermocycling at 5-55 °C, fracture test was performed using Instron® (Instron Corp, USA) with compressive loading. For microleakage testing, teeth were immersed in 0.5% basic fuchsin dye for 24 h and then, sectioned in mesio-distal direction for evaluation. Data were analyzed with Mannwhitney and Kruskal-Wallis (microleakage), ANOVA and Duncon tests (fracture resistance).

Results:

Direct endocrown (1633.3N) restorations showed superior fracture resistance. While no significant difference was found between direct and indirect endocrown (1434.3N) restorations ($P>0.05$), a significant difference was found between direct endocrowns and class II (1235.1N) restorations ($P<0.05$).

For microleakage test, class II restorations (0.83) showed superior microleakage resistance. A significant difference was found between class II and indirect endocrown (1,83) restorations ($P<0.05$), while the difference between between class II and direct endocrown (1.21) restorations was nonsignificant ($P>0.05$).

Conclusion:

Endocrown restorations were successful in increasing fracture resistance when used in primary molars and can be considered as a new esthetic alternative for endodontically treated primary teeth. However, indirect endocrown restorations showed higher values of microleakage in comparison to class II restorations.

Keywords: Endocrown, Composite Restorations, Fracture Resistance, Microleakage

Smear Layer Removal Efficacy of Manuel, Rotary and Resiprocal Systems on Primary Teeth Root Canal: An in vitro Scanning Electron Microscopy Study

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Aim: The aim of this study was to evaluate smear layer removal efficacy of K file, Protaper, Twisted File, Resiproc and OneShape systems when these used for primary teeth root canal instrumentation.

Material-Methods: Seventy-five primary mandibular molar human teeth were randomly divided to five groups (n:15). The distal canals of teeth were shaped with each of the following instrumentation system: K file (manuel instrumentatin), Protaper, Twisted File, Resiproc or OneShape. The intracanal irrigant used after each instrument was 2.5% sodium hypochloride (NaOCl). After the shaping, 17% ethylenediaminetetraacetic acid (EDTA) and ethanol were used. The teeth were fractured longitudinally then coronal, middle and apical 1/3 of the segments were analyzed with SEM at the standard magnification of 1000X. Presence of smear layer was evaluated with five-step scale. Data were analyzed using Kruskal-Wallis and Mann-Whitney U test.

Results: There was statistically significant differences among the groups for the smear layer scores ($p < 0.05$). At the coronal and middle third, statistically significant difference between the OneShape (Mean coronal 2.4, middle 2.9) and Protaper groups were found (Mean coronal 1.2, middle 1.6) ($p < 0.05$). At the middle and the apical third statistically significant difference between Protaper (Mean middle 1.6, apical 2.5) and Resiproc (Mean middle 2.7, apical 3.3) groups were found ($p < 0.05$).

Conclusion: Protaper produced less smear layer throughout the canal length and Twisted File showed similar results with Protaper ($p > 0.05$). Within the limits of this study, these systems were preferable for primary root canal treatment.

Keywords: SEM, smear, debris, Resiproc, Protaper

Evaluating The Effect Of Some Medicinal Plants (Mentha piperita, Ocimum basilicum, Rosmarinus officinalis, Salvia officinalis) On Whitening Of The Permanent Teeth

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Aim: Nowadays, whitening of stained teeth has become the most popular topic in aesthetic and cosmetic dentistry. Because of the side effects of materials that were used for bleaching, in this study the effect of some plants which were used in Anatolian folk medicine on the treatment of tooth staining were examined.

Materials-Methods: In this study, upper central incisors which were extracted for periodontal reasons were used. The colour values of numbered teeth were obtained and the teeth were immersed in to three different essential oils of medicinal plants (Mentha piperita, Ocimum basilicum, Rosmarinus officinalis, Salvia officinalis) for different time periods (1 day, 1 week, 1 month). At the end of the immersion periods, colour measurements of all samples were made and the colour changes were analyzed. Obtained data were statistically analyzed by using ANOVA and Duncan test.

Results: As a result of the variance analysis, plant species and the duration of immersion was found to be statistically significant ($p < 0.001$).

Discussion: Within the limits of this study, we can indicate that tested medicinal plants has a whitening effect by resulting significant change in tooth colour.

Keywords: Medicinal plants, Teeth, Bleaching

The Evaluation Of Residual Monomer Released After Polimerisation Of Different Resin Materials

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Aim

Resin materials are used for restoration or fissure sealant in pediatric dentistry and consist of different types of monomers (BISGMA,UDMA,HEMA,TEGDMA). Monomers can be released into the oral cavity after polymerization.

Residual monomers released after polymerization from resin-based restorative materials have been reported to affect the mechanical properties negatively. Besides, allergic, cytotoxic, and carcinogenic effects are shown. Our study aims to identify the substances and the determination of quantities released from the material into the oral environment

Material & Methods

Disk sizes (2 mm) prepared for each material group (flowable composite resin-pink&blue, packable composite resin-pink,blue,yellow and A2, fissure sealant and RMCIS) were polymerized by LED light; the specimens were then placed in %75 ethanol-water. The monomer release in 10min, 60min, 1hr, 1day, 7days, and 14 days from the specimens was analyzed in HPLC. One-way ANOVA, Post-hoc, Tukey HSD tests were used for statistical analysis.

Results

The amount of residual monomer increased overtime. At the end of the 14th day, the maximum monomer released from the materials was BISGMA (mean; 50.17 ± 3.7). No significant difference was found in TEGDMA release between the flowable and the packable comonomers. The amount of total monomer released from A2 comonomer was higher than from the blue and pink comonomer ($p < 0.001$). Yellow comonomer was with the highest monomer release ($p < 0.001$).

Conclusion

The color factor in the comonomers is effective on residual monomer release. Polymerization should be strengthened to reduce the residual monomer release from colored comonomers. More studies are needed to investigate in vivo and in vitro about the different light-curing unit & polymerization periods.

Keywords: residual monomer, resin material, LED

The effect of antimicrobial mouthrinses on surface roughness of two different nanohybrid composites

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Aim: The aim was to examine the effects of four mouthrinses containing different ingredients to surface roughness of two different nanohybrid resin composites.

Material-Methods: Fifty samples were prepared for each composite resin, stored in distilled water and initial surface roughness was measured by profilometer. All samples were stored in Listerine Cool Mint, Oral-B alcohol-free, Andorex, Listerine Zero mouthrinses and distilled water (12 h,37C). Then, final surface roughness was measured. Data were analyzed by two-way ANOVA and Bonferroni tests, statistically.

Results: In total, regardless of the mouthrinses, it was not found statistically significant differences ($p>0,05$) between resin composites. Regardless of the resin composites, it was found statistically significant differences between mouthrinses ($p<0,05$). Listerine Cool Mint with essential oils and alcohol caused the greatest surface roughness values ($0.186\pm 0,023$) surface roughness value of Listerine Zero ($0.007\pm 0,008$) was similar to distilled water ($0.018\pm 0,011$). It was not found significant differences between Listerine Zero ($0.007\pm 0,008$) and Oral-B alcohol-free ($0.005\pm 0,007$).

Conclusions: The interaction between mouthrinses and composite resins was statistically significant. Different types of mouthrinses caused surface roughness with varying degrees on resin composites. The greatest surface roughness values with Listerine Cool Mint on both resin composites were detected. When Clearfil Majesty Esthetic was exposed to Oral B alcohol-free and Listerine Zero mouthrinses, compared to other mouthrinses and distilled water, it was found the least and statistically different surface roughness values. It was not found significant surface roughness difference between Oral B alcohol-free and Listerin Zero for Filtek Z550 resin composite and the lowest roughness values were obtained with these mouthrinses.

Keywords: Mouthrinses, Surface roughness, Nanohybrid resin composites

Evaluation Of Effects Of Tooth Brushing And Smoking Habits On Tooth Decay With Respect To Demographical Data

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Aim:The aim of this study is to evaluate the tooth brushing habits, and tooth decay ratios based upon the demographic data (ie. Age, gender, marital status, educational background and income level).

Material & Methods: The aim of this study is to evaluate the tooth brushing habits, and tooth decay ratios based upon the demographic data (ie. Age, gender, marital status, educational background and income level).Data was analysed with Pearson chi-square test.

Results: Based upon the statistical evaluation, the following results were acquired. Those brushing their teeth most frequently (twice a day) 20-30 years old (50.0%), and in women (40.9%), those completing their PhD education (66.7%) and those having high income level (59.5%). Smoking habit was most frequently detected in people aged between 31 and 40 (44.7%), in men (45.5%), in single people (38.2%), those not having an educational background (literate) (100%) and in those people with low income level (76.2%).(p<0.05).

Conclusion: A tight correlation was detected between tooth brushing and smoking habits and dental decays.

Keywords: Dental decay, Demographical data, Smoking, Tooth brushing

Effect of continuous versus intermittent (28 days on 7 days off) orthodontic forces on root resorption: A micro-computed tomography study

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Aim: To compare the extent of root resorption following continuous versus intermittent orthodontic forces activated in a similar way to a 4-weekly orthodontic adjustment period.

Materials-Methods: Twenty-five patients required the extraction of upper first premolars were recruited in study. A buccally directed continuous force of 150 grams was applied to the upper first premolar on one side for 15 weeks. A buccally directed intermittent force (28 day on 7 day off) of the same magnitude was applied to the contralateral first premolar. The teeth were extracted at the end of the experimental period and processed for volumetric evaluations of resorption craters. The degree of tooth movement and rotation were measured on the models. Wilcoxon test was used to compare the total volumes of resorption crater between force groups, the different surfaces (buccal, lingual, mesial, distal) and the different levels (cervical, middle, apical) of the root.

Results: Continuous force application ($0.788 \pm 0.440 \text{ mm}^3$) displayed significantly higher root resorption volume than the intermittent force application ($0.639 \pm 0.572 \text{ mm}^3$) ($p=0.025$), particularly on the buccal ($p=0.019$) and lingual ($p=0.030$) surfaces and the middle third of the root ($p=0.005$). There was more tipping ($p=0.000018$) and rotational ($p=0.0000055$) movement in the continuous force group.

Conclusion: In a 4-weekly orthodontic adjustment period, intermittent force significantly reduced the amount of resorption when compared to continuous force. Although there was less degree of tooth movement with intermittent force, unnecessary rotational movement was avoided. This is crucial in patients who are predisposed to OIIRR and the use of this intermittent regime should be considered.

Keywords: Preventive orthodontics, Root resorption, Orthodontic tooth movements, orthodontic force

Calcium/phosphorus Based Remineralizing Therapy in Dental Practice

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Multiple international studies have found fluoride containing toothpastes, mouthwashes, etc., to be highly effective in preventing tooth caries. Fluoride has been identified to have caries preventive properties and been widely used to fluoridate water since 1940. Subsequently, there was a gradual increase in the use of fluorides in food items and oral medicinal products. This inadvertent use has led to an increase in fluorosis as a public health problem. Currently, recommendations are unclear as to which items can be used for caries management when the consumer specifically does not want to use fluorides, or when they put the patient at risk of developing fluorosis. The pathogenesis of caries involves a succession of demineralization and remineralization activities. At its most basic level, dental caries is the result of a process whereby the mineral constituents of the tooth are demineralized by organic acids produced by dental plaque bacteria. Since it has been established that the caries process is a continuum, it is therefore possible to intervene at any stage with a therapeutic product or an intervention methodology. Including remineralizing treatments into routine dental care programs can strongly support public caries control programs.

This presentation aims to show medical benefits of using R.O.C.S. remineralizing systems to manage the most common diseases of hard dental tissue, such as caries, fluorosis and non-caries lesions.

Sedation in Children

Behiye Bolgü

The most important condition for a successful treatment in pediatric dentistry is to ensure compliance with pediatric patients. Fear and anxiety that arise from parental or socio-cultural factors originating from the surroundings, negative dental experience of the child, and dentist's lack of experience with the behavior of the child are the most important problems of child dentistry. Some children in need of dental treatment can not adjust to treatment because of fear and anxiety of dental treatment, this leads to a high failure rate in the first sessions of treatments. In the researches; it is understood that children with fear of dentistry have a statistically significant number of teeth decay than others. Fear and anxiety in child dentistry is often one of the most difficult problems to solve because it prevents treatment approaches and success.

Pharmacological methods are the next step to be applied when psychological approaches are inadequate to reduce the fear and anxiety of patients. Pharmacotherapy in child dentistry is divided into sedation and general anesthesia. Sedation; psychological and physiological reactions to the patient due to dental treatment or other similar operations using different techniques and agents is the most reduced without affecting consciousness and protective reflexes. Considering the patient's need for treatment and fear and anxiety, general anesthesia is the method to be used when sedation does not provide a solution.

Importance of Risks and Prevention of Dental Caries in Children with Cleft lip-palate

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Orofacial clefts, which include non-syndromic cleft lip with or without cleft palate, are the most common birth defects in humans. CL/P incidence varies with ethnicity, race, geographic origin, and socioeconomic status. In 2003, the World Health Organization (WHO) estimated an oral cleft incidence of 1 per 700 live births each year internationally. In children with CLP, the scar tissue that develops after plastic surgery, and therefore the inability to utilize the mechanical cleaning effect of the teeth, as well as nutritional problems, pose a risk for caries formation (Chapple and Nunn 2001; Cheng, Moor, and Ho 2007; Mutarai et al., 2008; Reid et al., 2006). Paul *et al.* (Paul and Brandt 1998) showed that plaque formation in the anterior segment of the dental arch was greater than in the posterior segment in children with surgically-reconstructed lip and palate. The reason for this is that the intraoral movement and salivary flow rate are affected by the decrease of lip elasticity after surgery, and accordingly the formation of anterior plaque is excessive. In addition, hypoplasia, other developmental malformations and delayed eruption can be seen in primary and permanent upper incisor teeth. As a result, primary upper incisor teeth are commonly at risk of early-childhood caries (ECC) in CLP patients.

The main outcome of this presentation is to explain the risks of tooth decay in babies born with CLP. The pediatric dentist's role is important to obtain and maintain good oral hygiene, a healthy feeding habits and good routine preventive and restorative care. Oral dental health is located at the center of the treatment protocol for patients with CLP and directs the patient's progressive therapies.

Implantation In Atrophic Cases And Immediate Loading: Where Are We Now? What Can We Do?

Muzaffer ASLAN

DDS, PhD, ÖZEL AKADEMİ ADASM, ADANA, TÜRKİYE

Every edentulous patient is different, has different expectations and demands. The clinician has to determine the needs of each patient and propose the most appropriate approach according to the clinical situation so as not to be lost in the multiple treatment options.

In addition to different treatment options, in some cases it is possible to implantation following the extraction and even to load the prosthesis immediately.

Immediate loading has become a preferred technique in order to reduce the duration, cost and discomfort of the treatment, and facilitate the return of the patient to his social life.

Clinical trials of implant applications and immediate loading in atrophic cases are presented in the context of the recent literature.

The Relation Of Current Prosthetic Status With Demographic Data

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Aim: The aim of this study is to investigate the relationship between current prosthetic status and demographic variables such as age, gender, marital status, educational status and income.

Material-Method: Data regarding demographic variables, medical anamnesis, dental status and current prosthetic status of 440 patient were gathered by means of questionnaire, examination and recorded to survey forms. Data was analysed with Pearson chi-square test.

Results: Statistical analysis revealed that the number of patients that use prosthesis increases with age. While 9.2% of patients in 17-30 years of age group had only fixed prosthesis, all prosthesis types were more frequent in 41-60 years of age group patients. All prosthesis types were more frequent in married patients compared to single ones. Fixed partial dentures were statistically significantly higher in high school graduated and university degreed patients. The relation between age, marital status, education level and type of prosthesis were statistically significant ($p < 0.05$). The frequency and distribution of current prosthesis types with respect to gender and income were not statistically significant ($p > 0.05$).

Conclusion: Married patients and 41-60 year age group patients among age groups use all types of prostheses predominantly. As education level increases number of fixed partial denture patients increase. Fixed partial dentures are more frequent than removable and combined prosthesis in all education levels.

Keywords: Demographic data, prosthodontic status, prosthodontic

The Assessment Of Removable Denture Related Complaints With Demographic Data

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Aim

The aim of this study is to assess the complaints related with removable denture use according to demographical data.

Material and Methods

Anamnesis, intraoral and extraoral examination findings, demographical data such as age, gender, marital status, education level of 116 patients using removable dentures were recorded.

Complaints investigated included pain, lack of retention stability, chewing ability, gagging reflex, chewing sounds, esthetic complaints, difficulty in speaking, denture fracture, deterioration of prosthesis material, soft tissue changes. Data was analysed with Pearson chi-square test.

Results

Denture fracture was observed significantly higher in >60 years age group ($p=0.049$). While localized pain occurs more frequently in men (59.1%), widespread pain and lip/cheek biting-tongue pain occurs more frequently in women (77.8% and 55.6% respectively) ($p=0.004$). Chewing ability of women is worse (67.9%) ($p=0.021$) and deterioration of the prosthesis material (55.6%) ($p=0.011$) and soft tissue lesions (66.7%) ($p=0.001$) is more frequent in men. Single patients experience significantly more pain in all sites ($p=0.040$) and have more gagging ($p=0.028$) than married patients. With respect to educational status no statistically significant difference was found between groups except for gagging reflex which was more frequent in highly educated patients and difficulty in speaking which was more frequent in primary school graduated patients. No statistically significant relation was found between other demographical data and complaint matches.

Conclusion

Older patients experience more denture fractures. Local pain and lip/cheek biting/tongue pain related with removable dentures is more frequent in women while widespread pain is higher at men. Single patients have more gagging reflex and denture related pain than married patients.

Keywords: existing denture, complaint, demography, age

Evaluation of Oral Health Related Quality of Life, Anxiety and Pain Levels in Implant Patients

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Aim: The aim of this study was to evaluate the anxiety specific to surgery questionnaire (ASSQ), oral health impact profile (OHIP-14) and visual analog scale (VAS) in implant surgery patients.

Materials-Methods: Forty-nine patients admitted to the Van Yüzüncü Yil University Dentistry Faculty for missing teeth were included in this study. Preoperative patients were asked to fill in the ASSQ and the OHIP-14 index. After the operation, VAS was given to the patients and they were asked to record the pain levels between 1-7 days and when pain was finished. In the first and third months postoperatively, the OHIP-14 was replenished. The obtained data were evaluated statistically.

Results: The average age of the patients participating in the study was calculated as 42.17. Preoperative and 1 month' scores showed statistically difference in terms of OHIP-14 scores ($p < 0,05$). There was no statistically significant difference between preoperative OHIP-14 and 3 month's OHIP-14 ($p > 0,05$). The ASSQ value was calculated as 24.12 ± 2.79 . According to VAS, the pain of the patients was completely disappeared at the mean of 5.2 ± 0.7 days.

Conclusions: Although there are many studies in the literature evaluating the effect of implant prostheses on oral health-related quality of life, no study has examined the effect of implant surgery on quality of life. Despite it was observed that in this study patients were disconcerting about implant surgery, the surgical procedure affected the OHIP-14 only in the first month. It is thought that further study is needed in this regard.

Keywords: oral health related quality of life, visual analog scale, anxiety, implant

Investigation of prosthetic treatment indication distribution in Cumhuriyet University Dentistry Faculty

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Aim: The aim of our study is to evaluate the distribution of fixed and removable prosthesis applied to the patients who applied to Cumhuriyet University Dentistry Faculty Prosthetic Dentistry Department by considering age groups and gender factor.

Material & Methods: The records of total prosthesis, removable prosthesis and fixed prosthesis patients who applied to our clinic between January 2014 and January 2018 and their treatments were examined. The examined patients were categorized according to firstly gender and after age groups. The number of the received data was evaluated numerically and divided into percentiles.

Results: A total of 11,523 patients; 69,45% fixed prosthesis and 30,53% removable prosthesis. 55,59% of fixed prosthesis patients, 49,87% of total prosthesis patients and 53,73% of removable partial prosthesis patients constitute female patients. In general distribution, it was observed that the most fixed prosthesis was in the range of 46-55 years and the most removable prosthesis was in the range of 56-65 years.

Conclusions: There are scientifically meaningful and valuable results in determining the number of patients who are diagnosed with tooth loss in our society and how they are treated and what kind of treatment they need more numerically. Our study has shown that the distribution treatment types of patients who applied to Cumhuriyet University Dentistry Faculty Prosthetic Dentistry Department.

Keywords: Indication, Prosthesis, Treatment

Comparison of two different unsplinted attachment systems for mandibular two-implant-retained overdentures

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Aim: There is a limited number of clinical studies for two-implant-retained overdentures (TIRO) in the edentulous mandible utilising unsplinted attachment systems either ball or locator attachment systems.

Materials-Methods: A total 20 edentulous patients with an average age of 62 years were included in this study. Implants were placed between January 2016 and December 2016. Each patient received two conical implants (Axis conical implant, Tag-dental, Israel) with the diameters of 3.75mm or 4.2mm and the lengths of 10mm or 11.5mm in the intraforaminal area of the edentulous mandible. All patient were treated TIRO opposed to maxillary complete dentures by utilising bilateral balanced occlusion. As an attachment system, ball attachment (ball, Tag-dental Israel) and locator attachment (equator, Tag-dental Israel) were applied first ten patients and the other ten patients, respectively. After applying the dentures, patients were asked to visit 24-hour control examination and if any complain exists patient can visit department for eliminating matter. Otherwise, patients will inquire for periodical control after 1-year period.

Results: After 1-year of clinical usage none of the implants was lost out of 40 implants. Relating to the different attachment systems, using one way ANOVA there were no significant difference between two attachment systems ($p>0.05$) utilising ball or equator. The most common complication associated with TIRO was loss of retention.

Conclusions: Although, the different attachments together with TIRO represent predictable and successful option to treat edentulous patients. Present study have to be evaluated carefully because of the small number of patients and the short observation period.

Keywords: attachment, implant, overdenture

Surgical management of oral tissues for prosthetic rehabilitation in patient with pancreatic cancer history

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Introduction: A harmonious relationship between dental prostheses and oral tissues is important for the successful use of prostheses. The purpose of this case report is to present a patient with pancreatic cancer history, who is surgically treated of oral tissues before prosthetic application. **Case Reports:** In this present case, bilateral flabby alveolar ridges were determined at the examination of maxillary edentulous patient who was treated for pancreatic cancer five years ago. It was also observed that the patient's right buccal frenum and labial frenum extent to the alveolar crest ridge and that a sharp bone irregularity from spina nasalis to alveolar crest ridge. The flabby alveolar ridge regions were removed surgically and the tissues were sutured in a stable manner. Conventional frenectomy surgery was performed to remove buccal frenum. Z-plasty technique were performed to remove labial frenum and to access alveolar bone at spina nasalis region by full thickness flaps. The flaps were primarily sutured after osteotomy and osteoplasty procedures. The patient was rehabilitated prosthetically after soft tissue healing was completed. **Conclusions:** Some local anatomical and morphological differences in hard and soft tissues may cause deterioration of prosthesis stability, trauma, ineffective use of the prosthesis, and even prosthesis fractures in long term. Surgical management of oral tissues is crucial for the successful implementation of prosthetic rehabilitation.

Keywords: Flabby alveolar ridge, pancreatic cancer, Z-plasty technique

Traumatic Dental Injuries in Ordu: A Retrospective Study

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Aim: The aim of this study is to retrospectively assess the frequency of dental trauma, trauma type, trauma-related factors and treatment procedures for children aged between 1 and 15 years who have applied to Ordu University Faculty of Dentistry, Department of Pediatric Dentistry for a period of five years (April 2012 – December 2017).

Material& Metod: A total of 26.120 patients from Ordu and surrounding cities, aged between 1 and 15 years, have been recorded in Ordu University Faculty of Dentistry, Department of Pediatric Dentistry. Of these, 414 patients' and 660 teeth records were for dental trauma. The type of trauma in primary and permanent teeth, the difference between gender and age groups, the cause of trauma were analyzed using chi-square test. The distribution of dental trauma by age were calculated by cubic regression analysis.

Results: Over a last 5-year period, incidence of dental trauma defined as 1.58 % in children aged 1-15 years, from Ordu and surrounding cities. The most common type of trauma in the permanent teeth was enamel-dentin crown fracture (31.1%), while it was intrusive luxation (20.9%) in the primary ones. Most of traumatic dental injuries was found to have occurred in January and May and due to a fall. Most patients (35.7%) were referred to our clinic within 1-3 days, and 9.4% referred one year after injury.

Conclusion: Parents in living in Ordu should be aware of what should be done in case of any dental trauma and about the importance of advise with a dentist immediately after the trauma.

Keywords: Pediatric dentistry, retrospective studies, tooth injuries

Dental trauma knowledge of anaesthetists- a pilot study

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Aim: Perioperative dental damage is one of the most common anesthesia related complication. A thorough evaluation may necessitate a dental practitioner's help. Nevertheless, this anesthetic assessment is frequently overlooked by surgeons and anesthesiologists. The present study aimed to investigate, anesthesiologists how often and under what circumstances dental trauma occurs during general anesthesia as well as isolate possible anatomical, dental and anesthesiological risk factors, based on which suggestions for preventive measures could be made.

Material&Methods: For this purpose, a group of anesthesiologist were asked to complete a questionnaire by using e-mail and face to face conversations. This questionnaire form includes various question about level of professionalism, dental trauma education level, knowledge of dental trauma types and their management procedures. Furthermore via this questionnaire we tried to analyze dental trauma cause and predisposition factors related to anesthesia equipments. We know that children more prone to dental trauma. But anesthesiologists need to know which age groups exposure dental trauma overly.

Results: According to this questionnaire's results that most of anesthesiologists don't have knowledge about dental trauma.

Conclusions: Anesthesiologists have to receive more comprehensive training regarding oral and dental anatomy by this way anesthesiologists can minimize the risks of dental trauma. This scientific questionnaire is the first step of more wide project. Because we don't know incidence of dental trauma due to the general anesthesia and this situation indirect effects to patient-doctor relationship, insurance company, legal area in Türkiye.

Keywords: dental trauma, general anesthesia, mouthguards

Comperative Effectiveness of Poster and PowerPoint Templates Education About Management of Avulsed Permanent Teeth Among Children

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Aim:

Emergency management of traumatic dental injuries is of a key importance as the prognosis of traumatized teeth. Since school children have more strong memory than adults, giving education about dental trauma is highly considerable. The aim of this study is to evaluate the effectiveness of educational posters and PowerPoint templates on improving the knowledge level of primary school children regarding emergency management of dental trauma.

Material&Methods:

400 children between 7-14 years old were randomized into interventions (poster and Power Point templates) and control groups. 200 children's baseline levels of knowledge about dental trauma were obtained by using a questionnaire. Posters and PowerPoint templates containing information on dental trauma management were displayed to 2 different groups of 100 different children; in the control group no education was given. The data were obtained and chi-square test was used for statistical analysis.

Results

There was no statistically significant difference between PowerPoint templates and the poster group, but the knowledge of children about management of avulsed permanent teeth in PowerPoint group was slightly higher than in the poster group. However, the knowledge of children in both poster and PowerPoint Group showed a statistically significant increase compared to the control group ($p < 0.01$).

Conclusions

In primary schools, the education about dental trauma is highly essential and it is more effective to teach through the technological instruments.

Keywords: dental avulsion, education, primary school, survey study

Root fractures in children between 8-15 years: Distribution of localization, type and sex

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Aim: The aim of this study was to classify the location and the fracture line with dental tomography evaluation of 60 root fractures in 36 patients aged 8-15 years, who presented with a history of trauma at the Paediatric Dental Clinic of Dicle University.

Methods: In cases with a fracture or a suspected fracture on periapical film, cone-beam computed tomography was applied and the trauma area and fracture line localization were examined and classified. This study was conducted on 36 pediatric patients (8-10, 11-13, and 14-15) with dental injuries. With the aid of CBCT, the 60 teeth determined with root fractures were separated into 3 groups of horizontal, oblique and vertical according to the area of localization. For statistical analysis, the Chi-square test, the Pearson Chi-square test, and the two-way ANOVA test were applied.

Results: Root fractures were determined in a total of 60 teeth of 36 children aged between 8 and 15 years old. Root fractures were seen more in males at a rate of 75% than in females at 25%. While dental root fractures were determined in females in the 8-10 years age group at a rate of 46.2%, more were determined in males in the 11-13 years age group at a rate of 68.1%. The root fractures were observed at a rate of 86.7% in the central teeth in the maxilla and 13.3% in the lateral teeth.

Conclusion: Dental injuries in children are still a problem frequently encountered by dentists. Treatment of dental trauma with multi-discipline approaches is important.

Keywords: Root fracture, trauma, dental injury

Retrospective Analysis of Traumatic Dental Injuries in Zonguldak

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Aim: To determine the state of dental injuries in Zonguldak in order to increase the social consciousness and take the necessary precautions.

Material&Metods: We retrospectively analyzed dental trauma records of the 188 patients aged 1-12 years-old who referred to Bülent Ecevit University, Faculty of Dentistry, Department of Pediatric Dentistry, during January/2014- January/2017. Data obtained from trauma forms were evaluated according to age, gender, passing time after trauma, cause of trauma, seasonal distribution, dentition status, number of affected teeth, type of trauma and treatment. Data analysis was performed with SPSS for Windows, Version21.

Results: Dental trauma records of 188 patients, including 68 girls(36.3%), 120 boys(63.8%), with a total of 316 traumatized primary and permanent teeth were evaluated. More dental trauma was observed in permanent teeth(59.5%) than primary teeth(40.5%)and between 7-12 years-old group(61.7%). Late referral to the clinic for treatment of dental injury among the study population was frequently observed. The most common cause of dental trauma was falls(75.0%) and injuries were encountered more frequently in summer(31.9%). The most common types of trauma were subluxations in primary teeth and enamel-dentin fractures in permanent teeth($p<0.05$). The most commonly applied treatment was follow-up and extraction in primary teeth and restoration in permanent teeth($p<0.05$).

Conclusion: Early intervention and proper treatment planning are very important for the prognosis of the injured tooth. However, except for severe injuries, the rate of admission to the clinic after trauma was found to be very low. Therefore, the level of social awareness and knowledge on trauma needs to be increased.

Keywords: Dental Trauma, Retrospective Analysis, Primary Teeth, Permanent Teeth

Dental age estimation from the developmental stage of the third molars with Demirjian Method

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Aim: Tooth development is a good parameter for estimating chronological age. This study investigated the developmental stages of third molars in relation to chronological age and evaluated third molar development of children according to location and gender in the Eastern Anatolia Region of South Western Turkey.

Materials-Methods: A retrospective analysis of panoramic radiographs of 1624 patients aged between 6 and 18 years was conducted, and developmental stages of the third molars were evaluated using the modified Demirjian's classification. The mean age, standard deviation, minimal and maximal age, and percentile distributions were recorded in each stage of development. A Mann-Whitney U test was performed to test the developmental differences in the third molars between maxillary and mandibular arches and between genders.

Results: The radiolucent bud of the mandibular (9.14) third molars appeared earlier than maxillary (9.62)($p<0.01$). The mean age of first appearance of a radiolucent bud was 9.47 and 8.85 years for the mandibular third molars, respectively($p<0.01$).

The average age of the initial mineralization was 9.67 for girls and 10.29 for boys in the maxilla ($p<0.05$). The average age to observe the crown completion was 12.44 in maxilla and 12.54 in the mandible. There was a strong correlation between third molar development and chronological age. Agenesis can be determined conclusively if there are no radiolucent buds after age 14.

Conclusion: Ethnic and environment factors can affect the human development; further research is needed to build the data of Turkish population in the other ethnic groups and parts of Turkey.

Keywords: Demirjian method, dental age estimation, third-molar mineralization

Investigation of the Relationship Between the Number of Fungiform Papillae and Taste Preferences in Children

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Aim: The aim of this study was to determine the fungiform papillae (FP) number on the tongue in children and investigate the relationship between taste preferences and FP number.

Material-Methods: One-hundred-and-fifty-seven children (82 boys & 75 girls, age 5-10) who attended to Pediatric Dentistry Department of Marmara University were included in the study. The children who had any illnesses related to otorhinolaryngology or used any antibiotics/medications in last month were excluded. FP were quantified using the "Denver Papillae Protocol for Objective Analysis of Fungiform Papillae". Questionnaires were presented to parents and their children to record their child's taste preferences of the basic tastes namely sweet, salty, bitter and sour. Then 5 specific foods in each sweet, bitter and sour food group were questioned to specify the taste preference. Statistical analyses were done using Independent t test, Mann Whitney U test of the NCSS program.

Results: The mean and median numbers of FP were 32,22+12,59 and 29 respectively. The FP number decreased significantly as the age increased ($r=0,441$, $p=0,001$) and the mean of girls' FP numbers was significantly higher than the boys' ($p=0,022$). The difference between taste preferences and FP number were not statistically significant (sweet $p=0,317$; salty $p=0,438$; bitter $p=0,234$, sour $p=0,857$).

Conclusion: This study showed that the variance in the FP number didn't affect the sweet, salty, bitter and sour taste preferences of the children.

Keywords: fungiform papillae, taste, taste preference

Effect of different oral hygiene motivation methods on plaque elimination

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Aim: The aim of our study is to compare the effectiveness of different oral hygiene motivation methods in periodontal treatment for plaque control.

Material-Methods: 120 patients were divided into 3 groups according to different oral hygiene motivation methods. Group 1: Individuals who were given only oral hygiene instructions using dental model (M-OH), group 2: individuals used plaque dyeing agents additionally to oral hygiene instructions using dental model (PDA-OH) and in group 3, individuals were shown microscopic images of plaque in addition to oral hygiene instructions using dental model (MIC-OH). Plaque scores were assessed using 'S&L plaque index' before and 4 weeks after oral hygiene instructions were given. The Wilcoxon Signed Rank test was used for intra-group plaque scores and the Bonferroni corrected Mann-Whitney U test was used to assess inter-group plaque scores.

Results: The plaque scores after oral hygiene instructions were significantly lower in all groups compared to the pre-instruction PI scores ($p < 0,05$). When the post oral hygiene instruction plaque scores were evaluated, lower score levels were found in the PDA-OH group ($1,08 \pm 0,23$) than in the MIC-OH ($1,30 \pm 0,16$) and M-OH ($1,28 \pm 0,16$) groups ($p < 0,016$). There was no statistically significant difference between groups of MIC-OH and M-OH ($1,28 \pm 0,16$) ($p > 0,016$).

Conclusions: Oral hygiene training has been found to be important in patient plaque control. It has been found that the amount of plaque demonstrated to the patient is more effective in terms of motivation.

Keywords: oral hygiene, periodontal treatment, plaque index

The relationship between breastfeeding duration and deleterious oral habits

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Aim: There are controversies regarding the interaction of breastfeeding with deleterious oral habits (DOH). This study aimed to investigate the association of breastfeeding duration and presence of DOH.

Material and methods: A total of 135 children and their parents, including 64 boys and 71 girls, who applied to the Department of Orthodontics and Child Dentistry of Cumhuriyet University Faculty of Dentistry, were included. Children included in the study are aged between 9 and 12 years. Intra oral and extra oral examinations made by the observer and the parents of the children were questioned about the breast-feeding duration and the presence of DOH (finger sucking, nail biting, lip sucking, bruxism and pacifier use). The Fisher exact test was used to compare groups regarding the presence and absence of habits and the different periods of breast-feeding.

Results: 27.3% of the individuals were breastfed for 0-6 months and 76.3% for 12-24 months. The most common bad habit was nail biting (31.1%). There was no statistically significant association between the breastfeeding duration and DOH ($p > 0,05$).

Conclusions: In conclusion, there was no significant relationship between the breastfeeding duration and DOH in our study. It is considered that more extensive studies should be performed in larger patient groups.

Keywords: Breastfeeding, Deleterious Oral Habits, Pacifier Use

WHITE SPOT LESION FORMATION IN ORTHODONTIC TREATMENT: AN IN VIVO STUDY

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Aim: The aim of this clinical trial was to determine reveal which periods of white spot lesion formations are more common during orthodontic treatment.

Material-Methods: Thirty patients (18 females, 12 males) who had skeletal and dental Class I malocclusion with permanent dentition were included in the study. These patients have mild crowding and they treated with non-extraction protocol. Patients were examined by using a quantitative version of the laser fluorescence method (QLF). Patients were followed up with QLF records at 3-month intervals starting from the beginning and at the end of treatment (T0=Beginning, T1=3. Month, T2= 6. Month, T3= immediately after debonding). The average treatment duration is 11±3.12 months. The fluorescence loss and area of the any white spot lesions was clinical visible on the computer screen and images were analyzed by QLF software. Genders differences in lesion development were compared with the Independent paired-t test. The intra-group differences were assessed by Paired-samples t test. The differences between the groups were evaluated by Independent-Samples t test.

Results: At the end of the treatment, a total of 184 white-spot lesions were detected. There is no difference between genders in terms of the formation of white spot lesions. White spot lesions were seen in all of groups ($p < 0.05$). The increase in lesion formation was mostly detected in the second period (T2, $p < 0,001$).

Conclusion: White spot lesions occur during orthodontic treatment. Lesions were detected in both genders. Most lesion formation was observed in the maxillary lateral incisors.

Keywords: white spot lesions, QLF, non-extraction orthodontic treatment

Effect of intracanal medicaments used in endodontic regeneration on the push-out bond strength of a calcium silicate-based cement to dentin

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Aim: The aim of the present study was to evaluate the effects of various endodontic regeneration agents on the push-out bond strength of iRoot BP Injectable Root Canal Repair Filling Material (iRoot BP) to root-canal dentin.

Material-Methods: Fifty single-rooted human teeth were selected and instrumented to obtain a standard internal diameter of 1.5 mm. Specimens were randomly divided into 4 experimental groups treated with an intracanal medicament [calcium hydroxide (CH), double antibiotic paste (DAP), triple antibiotic paste (TAP), TAP with amoxicillin (mTAP)] and a non-treated control group. Medicaments were removed after 3 weeks, and iRoot BP was applied to all specimens. The coronal portion of each root was then sliced into 2-mm-thick parallel transverse sections (2 slices per tooth, n=20 slices per group), and a push-out test was used to measure the bond strength of iRoot BP to dentin. Data were analyzed using Kruskal Wallis and Mann-Whitney tests, with the level of significance set at $p < 0.05$.

Results: The push-out bond strength of the CH group was significantly higher than that of the TAP, DAP and mTAP groups ($p < 0.005$).

Conclusion: Within the limitations of the present study, it can be concluded that in comparison to CH, the use of intracanal medicaments containing antibiotics for revascularization and endodontic regeneration significantly lowers the bond strength of iRoot BP to root dentin.

Keywords: Intracanal medicaments, regenerative endodontic treatment, iRoot BP Injectable Root Canal Repair Filling Material (iRoot BP), bond strength, push-out test

Assessment of different remineralization agents by surface microhardness analysis (SMH)

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Aim: Remineralization as a treatment procedure has received a lot of attention from researchers. Clinical evidence has shown that the artificial caries lesion can be reversed completely or at least in part by remineralizing agents. Surface microhardness (SMH) is possible to assess the early stages of enamel demineralization and remineralization. SMH is highly sensitive and reproducible method. The aim of study is to assess the remineralization capacity of different remineralization agent by SMH Analysis.

Material and Methods: In our study, 40 enamel blocks were divided into groups as: Group-1 (GC Tooth Mousse with 10% Casein Phosphopeptide-Amorphous Calcium Phosphate [CPP-ACP]), Group-2 (GC MI Paste Plus with 900 ppm Fluoride content with 10% CPP-ACP), Group-3 (R.O.C.S. Remineralizing Gel with $C_3H_7CaO_6P + MgCl_2 + 10\% Xylitol$) and Group-4 (Control; Remineralization Solution). The enamel samples were immersed in a demineralization solution maintained for 72 hours and remineralization agents were applied with pH cycling (described by ten Cate et al., 1995) for 6 days. SMH analysis was performed at the baseline, after demineralization and after pH cycling. SMH measurements were performed to three areas in each sample with 300g force for 15 sec. The obtained data were analyzed statistically using ANOVA test, Kruskal Wallis test and Wilcoxon Signed Rank test with SPSS-22 program. The results were evaluated at $p < 0,05$ significance level.

Results: SMH was found to be a statistically significant difference between demineralization and remineralization measurements for each group. p values were respectively 0.005 (Group-1), 0.005 (Group-2), 0.005 (Group-3) and 0.017 (Control). The Percentage Surface Microhardness Recovery (%SMHR) of enamel samples were 10% CPP-ACP + 900 ppm Fluor > 10% CPP-ACP > $C_3H_7CaO_6P + MgCl_2 + 10\% Xylitol$ > Control. But; statistically significant differences were not observed between the groups ($p = 0,290$).

Conclusions: Three different agents in our study can be considered effective for remineralizing to artificial caries lesions.

Keywords: CPP-ACP, Calcium glycerophosphate, Surface Microhardness (SMH), Remineralization, Demineralization

Exposure of Gingival Tissue with Diode Laser Around Delayed Eruption of Incisor Tooth

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Introduction: Although soft tissue surgical operations are rejected by children, laser assisted operations have many advantages over conventional methods such as advanced control of bleeding and less discomfort during the operation, reduced swelling and chances of infection, shortened healing time.

Case Report: A 10-year-old girl who applied to Marmara University Faculty of Dentistry, Department of Paediatric Dentistry with a complaint with delayed eruption. According to intraoral examination it was observed that there was no #41 tooth in the oral cavity. Radiographic examination revealed that presence of a radiopaque lesion around the crown of unerupted #41 in the jawbone. For treatment, following the local anesthesia, an incision was made with a 980 nm wavelength diode laser (Doctor Smile, Italy) and the soft tissue on the tooth was excised and the radiopaque structures around the crown were surgically removed and sent to the pathology laboratory. Surgical area irrigated with physiological saline solution, and did not required suture for healing. In radiographic follow ups the eruption movement was observed. One year later, mamelons of tooth was observed on top of crest and it was confirmed by a radiograph.

b]Comments: This case report describes the use of diode laser for incision in the treatment of tooth with delayed eruption. This has been thought to be a successful treatment option due to its advantages both during operation and post-operative period.

Keywords: delayed eruption, diode laser, odontoma, surgery

Effectiveness of space maintainer on lower molar angulation and eruption of permanent teeth

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Aim: The aim of this study is to evaluate the effectiveness of band and loop space maintainer on lower molar angulation and eruption of second premolar teeth.

Materials-Methods: Patients with band and loop retainer that used for early primary second lower molar loss were scanned from the archive of Ondokuz Mayıs University, Faculty of Dentistry. 75 patients who had panoramic radiographs taken before insertion of band and loop maintainer (T0) and after debonding the maintainer (T1) was selected. Molar angle between the axe of mesial root and occlusal plane were measured. Contralateral first molar used as a control group. Also presence of impacted second premolar were evaluated. Paired sample t test and Wilcoxon signed rank test were used for angular measurements. Chi-square test was used to compare the eruption status.

Results: The localization of the maintainers were 23 lower right, 38 lower left. 8 second premolar teeth couldn't erupted at T1 when the 53 of them took place in the dental arch and this ratio was statistically significant ($\chi^2=0,003$). There was significant difference ($p<0,001$) between the molar angulation of the space maintainer side ($116,9\pm 8,8^\circ$) and contralateral side ($111,8\pm 7,7^\circ$) at T0. However there was no significant difference (T1-T0) between the angular changes of the first molars in both group ($p=0,174$).

Conclusion: Space maintainers should be placed just after loss of the primary teeth. If the time between loss of primary teeth and placement of space maintainer elapses, the effectiveness of space maintainer may decrease.

Keywords: Impacted permanent teeth, Molar angulation, Space maintainer

Evaluation of congenital number anomalies in permanent dentition of children

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Aim: This study is to analyze retrospectively the number anomalies of the permanent teeth of 6-8 year old children who applied to our clinic and to evaluate the distribution and prevalence according to gender and localization.

Material & Methods: The files of 5377 patients between the ages of 6-8 who applied to our clinic between September 2015-2017 were reviewed and those panoramic radiographs taken for any reason were selected for this study. Panoramic radiographs were evaluated for number anomalies, localizations, sex and age distributions and other dental anomalies. Statistical analysis was done with SPSS.

Results: 1988 patients (947 females, 1041 males) who were eligible to work with panoramic radiographs were included in the study. Permanent tooth agenesis was detected in 5.53% of the patients included in the study. The tooth with the most agenesis was the right mandibular second premolar. Dens invaginatus was found in 5.45%, gemination/fusion in 3.39% and peg-shaped laterals in 2.72% of the patients with tooth agenesis. 1.21% of the patients were found to have supernumerary teeth. Supernumerary teeth were found to be statistically significantly higher ($p < 0,05$) in males than females and most commonly seen as mesiodens in the premaxilla (75.86%).

Conclusions: Tooth agenesis was found more frequently than supernumerary teeth in child patients. It is important for radiologic and clinical examinations to be carried out carefully in terms of anomalies and for dentists to have adequate and detailed information on number anomalies so that diagnosis and treatment services can be provided in timely and accurate manner.

Keywords: Dental Anomalies, Hypodontia, Panoramic Radiography

Evaluation of shade matching success of dental students and dentists

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Aim: The purpose of this study was to evaluate shade matching success of dental students in different education stages -preclinical students and interns- and dentists.

Material-Methods: Dental students who have at the preclinical stage of dental education, interns, dentists who have clinically experienced maximum three years, and prosthodontists were included for this study. Preclinical stage of dental education was devoted to two groups related to before and after taking shade matching subject courses. Participants without eye diseases and disorders were randomly selected for this five groups (n=10) from Faculty of Dentistry, Gazi University, Ankara, Turkey. Pair of porcelain specimens (13 mm x 2.4 mm) were fabricated based on Vita Classical A1-D4 shade guide for each color. The dental students, dentists and prosthodontists were asked to match the pairs on the same conditions and color codes were noted. Shade matching success ratio were calculated for each groups and data was analyzed using One Sample T Test. **Results:** Group PD1 (preclinical dental students before taking shade matching subject courses) showed lowest success (average ratio: 37,25%) of matching the shades. Highest shade matching success ratio (average ratio: 61,25%) was experienced at Group P (specialists in prosthodontics). **Conclusions:** Accurate shade matching could be improved with education in this field and clinical experience. This study highlighted that success ratio differences of shade matching between various education levels on dentistry were clinically important to choose correct shade for harmonious restorations.

Keywords: Shade matching, dentist, dental student

Risk factors for preoperative anxiety before oral and maxillofacial surgery

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Aim: Anxiety is a temporary emotional state of tension, nervousness, fear, and high autonomic nervous system activity. The aim of our study is to investigate the anxiety level of patients before maxillofacial surgery and to also analyze the association between anxiety and demographical/clinical data.

Methods: This prospective, observational study was conducted in 333 patients, aged 16-60 years, scheduled for oral-maxillofacial surgery. Patients were interviewed before the operation to determine their preoperative anxiety with the Beck Anxiety Inventory. Demographic information was collected with a structured questionnaire (age, sex, American Society of Anesthesiologists (ASA) score, civil status, educational status, having major/minor surgery, informed about the operation, previous surgery, job-economic status, health insurance, and having a child in need of care). Levels of anxiety were allocated to 3 groups: 0 to 15, low to mild anxiety; 16 to 25, moderate anxiety; 26 to 63, severe anxiety. Multivariate conditional regression modeling was used to determine independent predictors of preoperative anxiety as well as to evaluate the relationship between anxiety and risk factors.

Results: High preoperative anxiety was associated with the female gender(OR=2.29), ASA-II(OR=1.38), more than 12 years of education(OR=1.68), major surgery(OR=1.52), housewife status(OR=1.76), being single (OR=1.93), absence of health insurance(OR=2.01), and having a child in need of care(OR=2.18). Previous surgery(OR=0.61) and being informed about the operation(OR=0.58) were associated with lower levels of preoperative anxiety.

Conclusions: It is critical for any surgery to carefully observe patients and assess appropriate preoperative anxiety (including its management) in order to avoid the troubling intra-postoperative results of preoperative anxiety.

Keywords: Preoperative anxiety, maxillofacial surgery, risk factors

Investigation of the Antimicrobial Activity of some Fruits with High Phenolic Content on Streptococcus mutans from Oral Pathogens

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Aim: The aim of this study was to investigate the level of antimicrobial activity on S. mutans of the pomegranate, strawberry and pineapple fruits rich in phenolic content.

Material & Methods: In this study, fruit extracts were prepared in the same conditions for each fruit, and the level of water soluble dry matter was determined. Total phenolic and flavonoid values were determined. Disc diffusion and Minimum inhibitory concentration (MIC) methods were used to determine antimicrobial activity.

Results: The ability to control pathogenic microorganisms in the oral flora is important in terms of oral and dental health. The most significant antimicrobial activity level within the limits of this study was obtained in the pomegranate fruit extract.

Conclusions: In order to suppress pathogenic microorganisms especially in the oral flora, the importance of natural herbal products should be emphasized and further research on this subject should be supported.

Keywords: Antimicrobial activity, S. Mutans, fruits extract

Investigation of the Effects of Yogurt, Probiotic Yogurt and Kefir on *Mutans Streptococcus* and *Lactobacillus* Levels and Saliva Buffering Capacity in Orthodontic Patients

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Aim: The aim of this study was to investigate the effects of probiotic yogurt, yogurt and a natural probiotic kefir on the amount of *S. mutans* (SM) and *Lactobacillus* (LB) and the saliva buffering activity in the mouth flora of young patients treated with fixed orthodontic devices.

Materials-Methods: A single-blind, prospective and crossover study was performed in 24 healthy adolescents, undergoing fixed orthodontic treatment for at least 12 months. The volunteers ingested probiotic yogurt, yogurt and kefir daily for 2 weeks. Saliva and dental plaque index were collected from each participant at the end of each period. SM and LB levels, saliva buffering capacity were counted. Friedman and Wilcoxon tests were used for statistical analysis at the 0.05 level of significance.

Results: A statistically significant reduction of salivary SM levels were recorded after probiotic yogurt and kefir consumption ($p < 0,01$). There were no significant change in salivary SM levels after consumption of yogurt ($p > 0,05$). A statistically significant reduction of salivary LB levels were recorded after kefir consumption ($p < 0,01$). There were no significant changes in salivary LB levels after probiotic yogurt and yogurt consumption ($p > 0,05$). A statistically significant decrease in the saliva buffering capacity after consumption of probiotic yogurt and kefir was recorded ($p < 0.01$). There was no significant change in saliva buffering capacity after yogurt consumption ($p > 0.05$).

Conclusion: Kefir consumption reduced LB amounts in patients with fixed orthodontic treatment. Probiotic yogurt and kefir consumption can be recommended in school-age patients with fixed orthodontic treatment to prevent tooth decay.

Keywords: Probiotic, kefir, *S. mutans*, *Lactobacillus*, saliva buffer capacity

Evaluation of parental knowledge levels about preventive dentistry practices

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Aim: Dental caries is the most common childhood disease. The researches on caries have been recently paying more attention to the prevention of dental caries and remineralization of initial carious lesion. The objective of this study is to find out the level of awareness among the parents about preventive dentistry practices.

Materials-Methods: The 601 parents who brought their children to receive treatment at the Department of Pediatric Dentistry, Inonu University, Malatya, Turkey were included in this study. (66.8% female, 33.2% male; age 37.04 ± 8.67 years). A 21-item questionnaire was filled in by the parents. The data were collected and the frequencies were obtained. The Chi-Square test was used for statistical analysis.

Results: We found that the participants with the higher income were more knowledgeable on fluoride application ($p < 0.01$). Besides, the participants with higher levels of education were more conscious of preventive dental practices such as fluoride and fissure sealants applications and well aware of which teeth were applied to the fissure sealants ($p < 0.01$).

Conclusion: Fluoride and fissure sealant applications must be part of children's prevention program. The parents' knowledge on preventive dentistry practices was not sufficient enough. Therefore, all parents during pregnancy and after childbirth period should be educated about preventive dentistry before it is too late for their children's dental health.

Keywords: Fissure sealant, fluoride, knowledge, parents, preventive dentistry

Oral Findings In Preterm and Low Birth Weight Infants: A Review

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Aim: Preterm and low birth weight (PLBW) infants are at significantly higher risk for health complications and also oral health problems. The present paper reviews the results of the studies about oral findings in PLBW infants/children.

Material&methods: Literature search was performed using PubMed/MEDLINE (through 2000) and restricted to the English language with the keywords: oral findings, preterm and low birth weight infants. The literature search resulted in 291 articles, of which 22 included in this review. The reported oral findings in PLBW infants/children were enamel defects, high caries risk, delay in tooth eruption, altered palatal morphology and crown dilacerations.

Results: Enamel hypoplasia and enamel opacity were the most reported enamel defects in the primary dentition. The high prevalence of enamel defects was associated with very low birth weight and low bone mineral content. The significant association with enamel defects and dental caries in the PLBW children was reported in several studies. Delay in tooth development and eruption among the premature infants was reported, but when corrected age was considered, no delay was found in tooth eruption. The higher incidence of palatal abnormalities and crown dilacerations in PLBW children may be associated with traumatic laryngoscopy and prolonged endotracheal intubation.

Conclusions: This review suggests an increased risk of enamel hypoplasia, enamel opacities and dental caries in PLBW children. Early diagnosis and preventive interventions are important for dental management of children with PLBW. Further well-designed studies are needed to analyze the complications of preterm birth and low birth weight on oro-dental structures.

Keywords: Oral findings, preterm, low birth weight infants

Caries Prevalence of Pre-School Children in Diyarbakır Province

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Aim: Early childhood caries (ECC) is the presence of one or more decayed, missing, or filled primary teeth in children aged 71 months (5 years) or younger.* There is a marked increase in the prevalence of ECC. This study was planned to determine the prevalence of caries in the children of diyarbakır ili kindergarten and to evaluate the effect of the sex, age, number of sibling, and socioeconomic status of the family on ECC.

Material&Metods: This research was conducted on 605 children between the ages of 3-6 who were educated in 5 different kindergartens in Diyarbakır. Intraoral examinations of children were carried out by 4 research assistants.

Results: Statistical analysis with stata 11.0, statistical demographic analysis with spss 22.0; the number of decay teeth, the number of siblings, the educational status of the mother, the fact that the mother was a housewife had no effect on the number of decay teeth.

As a result of this research, it has been found that the number of age-related decayed teeth, the increase in the number of decay teeth by the father being self-employed compared to other occupational groups, and that the children of primary school graduates are less decay than the children of literate fathers

Conclusions: Prevalence of caries was determined on a total of 605 children between 3-6 years of age in the 5 different kindergartens in Diyarbakır, and the effect of the child's sex, age, sibling number and socioeconomic status of the family on the caries was investigated.

Keywords: early childhood caries, caries prevalence, DMFT

Evaluation of the Dental Fluorosis Prevalence and Relationship Between Dental Caries and Fluoride Concentration in Drinking Water Among 13 and 14 –Year-Old School Children in Kırıkkale,Turkey

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Aim: The purposes of our study are; to determine the frequency of dental fluorosis in Kırıkkale, to investigate the association between the amount of fluoride in drinking water and severity of fluorosis, and to detect the association between dental fluorosis and dental caries.

Material&Methods: In our study, we included 13-14 years old school-children. We did intra-oral examination of children and determined the frequencies of dental fluorosis and caries. Also, we examined a questionnaire to parents and children to determine hygiene habits and drinking water resources used. The fluoride concentrations of determined drinking water sources were measured. Water samples were taken from the detected water sources and fluoride analyzes were carried out. The data were analyzed statistically using chi-square and *t* tests.

Results: A total of 1506 children were examined in the present study. The overall prevalence of dental caries among the school children was 70.5% (1061/1506). The prevalence of dental fluorosis was 21,8% (328/1506). Fluoride concentrations of drinking water throughout Kırıkkale have been found to vary between 0,128ppm and 5,967ppm. It has been found that as fluoride concentrations of drinking water increase, dental fluorosis increases significantly. However, there was no significant relationship between DMFS and dental fluorosis.

Conclusions: Identifying fluoride sources of drinking water and knowing what resources the community uses is a significant step in preventive oral and dental health practices. The fluoridation of drinking water has an important place in the control of tooth decay. However, many factors affecting the caries frequency and average should be considered.

Keywords: Dental Fluorosis, Dental Caries, Enamel Hypoplasia, Prevalence Study,

The effect of different pre-treatments on the shear bond strength between monolithic zirconia and resin cement

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Aim: The aim of this study was to evaluate the effect of surface pre-treatments on the shear bond strength of monolithic zirconia and self-adhesive resin cements

Material-Methods: 60 disk shaped (10 mm diameter and 2 mm thickness) monolithic zirconia specimens were prepared and randomly divided in 6 groups: Control group, no pre-treatment (Group C), sandblasting with 110 μm Al₂O₃ (Group S), Er:YAG laser irradiation (group L), conditioning with zirconia primer (group P), conditioning with zirconia primer after sandblasting (group SP), conditioning with zirconia primer after laser irradiation (group LP). One specimen of each group was analysed by scanning electron microscope (SEM) for evaluating the surface topography. Resin cement was applied on the specimen surface and shear bond strength (SBS) tests were performed. Data were statistically analyzed using One-way ANOVA and Tukey's multiple comparisons at a significance level of $p < 0.05$.

Results: All pretreated groups exhibited higher SBS values than control group (2.2 ± 0.58 MPa). The highest SBS values were observed at group SP (15.52 ± 1.65 MPa) ($p < 0.05$). Conditioning groups showed higher SBS values than unconditioned groups ($p < 0.05$).

Conclusion: Different pretreatments demonstrated an important effect on the SBS of monolithic zirconia and self-adhesive resin. The application of primer enhanced the effectiveness of bonding.

Keywords: Monolithic zirconia, Surface treatments, Primer, Resin cement, Shear bond strength

Comparison of salivary Visfatin levels in patients with dental caries

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Aim: Dental caries is a transmissible and infectious disease which is caused by bacteria colonizing and proliferating on the tooth surfaces. Teeth are in danger of caries from the moment they first appear in the mouth. Oral and dental health has been shown to be associated with systemic diseases and conditions. Visfatin, is a newly discovered adipokine released from adipose tissue, macrophages and leukocytes. Visfatin increases leukocyte activation and release of proinflammatory cytokines. Therefore, visfatin plays an important role in chronic inflammation. In this study, our aim was to compare salivary visfatin levels in patients with severe caries and caries free.

Material-Methods: Saliva samples were collected from 47 healthy controls and 125 patients with severe caries who admitted to Selçuk University Dentistry Faculty clinics between in 01/05/2017-01/12/2017. Saliva samples were collected according to stimulated saliva collection procedure. Visfatin levels were measured by ELISA. Statistics were made by using SPSSv.21.

Results: Visfatin levels in saliva were statistically higher in patients with caries median 130.7 (10-511ng/mL) compared to control group median 70.33 (5-270 ng/mL) ($p<0.001$). There was correlation between caries numbers and salivary visfatin levels. ($r=0.6$, $p<0.001$). Salivary visfatin levels were also higher in patients with periodontitis ($p=0.004$). The presence of both periodontitis and caries increases salivary visfatin most.

Conclusion: Finding of this prospective study demonstrated that salivary Visfatin levels can be a good biomarker for diagnosis both dental caries and periodontitis as it is simple and easily collected. It may be also a good indicator of intra-oral chronic inflammation.

Keywords: Visfatin, Dental Caries, Periodontitis, Saliva

Evaluation of relationship between signs and symptoms of bruxism and pulpal calcifications on females: A clinico-radiological study

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Aim: The purpose of this study was to investigate the relationship between signs and symptoms of bruxism and pulpal calcifications.

Material & Methods: A total of 100 female participants, who referred to our radiology clinic for a dental check-up, between 20 and 31 years old were sampled for the analysis. The exclusion criteria were consisted of painful temporomandibular joint disorders, mental disorders, use of psychotropic drugs, other substance abuse such as alcohol, gross malocclusion existence, prior removal of any teeth except the third molars, and presently undergoing orthodontic treatment. Bruxism was diagnosed based on the American Academy of Sleep Medicine criteria. All teeth were evaluated on digital panoramic radiographs for the detection of the pulp stones, excepting third molars, teeth with root canal treatment and root resorption. The data obtained from the study was assessed using IBM SPSS Ver. 21.0. Mean and standard deviations were calculated. Chi-squared test was used for testing relationships between categorical variables. $P < 0.05$ value was considered statistically significant for all analysis.

Results: 2800 teeth were evaluated and 61% of patients had at least one dental pulpal calcification. Of the 100 female patients, 59 were bruxist and 41 were non-bruxist. There was no statistically significant relationship between bruxism and pulpal calcifications ($p > 0.05$, $p = 0.683$). In bruxist individuals, the total number of pulpal calcification was 129, while in non-bruxists it was 84.

Conclusions: Although there was no significant relationship between pulp stone and bruxism, bruxism may increase the frequency of pulp stone. Other possible influencing factors should be investigated.

Keywords: bruxism, panoramic radiograph, pulpal calcification, sleep Medicine

Osteoarthritic Changes of Temporomandibular Joint Related to Age and Gender: A Retrospective Study

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Aim: To evaluate distribution of osteoarthritic changes (OC) in temporomandibular joint (TMJ) of patients according to gender, age ranges and each other.

Material & Methods: Male (n=19) and female (n=20) patients between ages of 48 and 87 were included for this study and their OC in TMJ were analyzed on cone-beam computed tomography images. Mann-Whitney U and Kruskal-Wallis tests were performed to compare statistically the results.

Results: Sclerosis was most prevalent type of OC in TMJ (29.5%) and subchondral cyst was most rare one of those (1.6%). There was no statistically significant difference of OC in TMJ according to gender and age ranges ($p>0.05$), but there was only statistically significant difference between subchondral cyst and sclerosis ($p=0.008$).

Conclusions: Gender and age factors do not always affect the rate of OC in TMJ. Nevertheless, some types of OC in TMJ may be seen more prevalent as sclerosis.

Keywords: Temporomandibular joint, cone beam computed tomography, dentition

Prevalence and characteristics of pneumatization of the articular eminence and glenoid fossa evaluated by cone beam computed tomography in Turkish population

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Aim: Pneumatization refers to the presence of air spaces within bones. Pneumatization in articular eminence (PAT) and glenoid fossa (PGF) facilitates various pathologies, such as inflammation, tumor and fracture, to permeate into joints. Noticing this situation that increases the risk of complication in surgical operations towards TMJ and makes the operation difficult, is important in considering the procedure and the surgical technic that will be applied and taking necessary precautions. The aim of this dissertation study is to evaluate the articular eminence and glenoid fossa pneumatization with regards to age and sex, as laterality and type with a cone beam computed tomography and to contribute to the literature.

Material & Methods: Study group consists of CBCT images that were taken due to independent reasons between June 2012-June 2014 at Marmara University, Faculty of Dentistry, Dentomaxillofacial Radiology Department. Images were examined retrospectively. In order to evaluate the data obtained IBM SPSS Statistics 20 is used. The study data are presented in terms of mean, standard deviation, percentage and numbers. The comparison of two categorical groups is made by chi-squared test.

Results: In all the phenomenon 14,7% PAT and 47,1% PGF are observed.

Conclusions: It is concluded that it is important to evaluate the pneumatic cells in articular eminence and glenoid fossa region before the surgical operations related to this region and that it is helpful to evaluate pneumatization with CBCT.

Keywords: Articular eminence, Cone beam computerized tomography, glenoid fossa, pneumatization, temporal bone

A Retrospective Evaluation of Compound Odontomas

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Aim:

Odontomas are one of the most common odontogenic tumors of the jaw. Although the exact etiology is not clear. histologically they are composed of various formations of dental tissue. In the WHO classification, they are divided into complex odontoma and compound odontoma. In compound odontoma, varied numbers of tooth-like elements are present These odontogenic tumors can be found anywhere in the dental arches. The aim of this study was to assess the frequency, age, localization and sex distribution of compound odontomas.

Materials and Methods:

A retrospective study was carried out in 43 patients with compound odontomas diagnosed in individuals, who consecutively attended the our clinic. These odontomas were evaluated for age, sex and localization with panoramic and cone beam computed tomography images. Data were interpreted with the aid of statistical analyses. Categorical parameters were expressed as the number and frequency (%) distribution, numerical variables were expressed as the mean and standard deviation.

Results:

Among these patients 48.84% (n=21) were male and 53.16% (n=22) were female. The mean age was 19.26 ± 9.62 (mean±std deviation). The most frequent region for compound odontoma was left maxilla (37.21%), followed by 30.23% right maxilla, 18,60% left mandible and 13.95% right mandible.

Conclusion:

The knowledge of the characteristic of the odontomas, is a basic aspect to achieve diagnosis, complications and a proper treatment.

Keywords: cbct, compound odontoma, panoramic

Effect of Dentin Desensitizers on Shear Bond Strength of Adhesive Resin Cement to Dentin

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Aim: The purpose of this study was to evaluate the effects of different desensitizing agents on shear bond strength of adhesive resin cement to dentin.

Materials-Methods: Forty specimen teeth were randomly divided into four experimental groups (n=10). Each group was treated with a different desensitizing agent (Teethmate, Ultra-Ez, and Shield Force Plus) respectively, except for an untreated control group. After desensitizing agents and adhesive resin cement were applied to each dentin surface, all specimens were stored in incubator at 37°C for 24 hours. The shear bond strength was measured using a Universal testing machine at a 0.5 mm/minute crosshead speed. Data were analysed by using a statistical software SPSS 24.0 (p<.05).

Results: The Shield Force Plus showed significantly the highest shear bond strength (24,90±0,81) compared with other groups (p<.05). Ultra-Ez showed the lowest shear bond strength (16,85±0,67) (p>.05). The Teethmate showed significantly higher bond strength values (19,52±0,77) compared with Ultra-Ez (p<.05). There was no significant difference among Ultra-Ez and control (17,17±0,33) groups (p>.05).

Conclusions: Desensitizers containing resin monomers and calcium phosphate increased the bonding strength, however desensitizers containing potassium nitrate and fluoride did not affect the bonding strength of resin cement to dentin.

Keywords: dentin desensitizers, bond strength, adhesive resin cement

Effects of Sodium Thiosulfate on Bond Strengths of Resin Cement to Endodontic Surfaces

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Aim: To investigate the effect of use of sodium thiosulfate after NaOCl on the bond strength of self-adhesive resin cement.

Material-Methods: This experimental study was conducted on 12-extracted human maxillary incisors. Three slices were cut from the middle third of the root by using a low-speed diamond saw (ISOMET, Buhler Ltd. Lake Buff, NY, USA). In each dentin slice, two canal-like holes were created. The slices were randomly separated into 2 groups: Distilled water group (the slices were immersed in 5.25% NaOCl for 30 minutes, then immersed in distilled water for one minute and 10% citric acid for 1 minute); sodium thiosulfate group (the slices were immersed in 5.25% NaOCl for 30 minutes, then immersed in 5% sodium thiosulfate for 10 minutes and 10% citric acid for 1 minute). Self-adhesive dual-cured resin cement (Bifix SE; VOCO GmbH, Cuxhaven, Germany) was filled into the holes and light polymerized for 10 s. The slices were subjected to push-out test in a mechanical universal testing machine (Instron, Canton, MA, USA). The bond strength data was analyzed using one-way ANOVA and LSD tests.

Results: The mean and standard deviations of the push-out bond strength (in MPa) were 11.12 ± 9.19 for distilled water group, and 15.06 ± 8.21 for sodium thiosulfate group. Sodium thiosulfate group had significantly higher push-out bond strength values than distilled water group ($P < 0.05$).

Conclusions: Within the limitations of this study, the application of sodium thiosulfate increases the bond strength of resin cements, which is decreased by sodium hypochlorite application.

Keywords: sodium thiosulfate, resin cement, bond strength

Changes in Chemical Composition of Enamel Submitted to Acid Attack After Bleaching

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Aim: The aim of this in vitro study was to determine the changes in chemical composition of enamel submitted to acid attack after bleaching.

Material-Methods: Human extracted premolars (n=10) were divided into four parts and the specimens obtained from each tooth were assigned to four groups. The bleaching systems, Opalescence PF 10% carbamide peroxide (CP), WHITESmile XTRA 38% hydrogen peroxide (HP) with laser activation and light activation were used. Then, WHITESmile after bleaching mousse was applied. No agent was used in the control group. The specimens were treated with artificial caries solution for 16 days to create acid attack. The losses of calcium, sodium, magnesium and potassium were observed every four days by inductively coupled plasma mass spectrometry (ICP-MS). Data were analysed by repeated measures ANOVA and post-hoc Bonferroni test ($p<0.05$).

Results: The highest loss measurements were obtained for calcium and the lowest for magnesium and potassium after the acid attack. The solubility had increasing tendency in the following days. At the end of the 16th day, calcium loss was observed to be higher in groups bleached with HP ($p<0.05$). There was no significant difference in the loss of sodium, magnesium and potassium between the groups.

Conclusions: The losses in chemical composition of enamel submitted to acid attack after bleaching are proportional to the levels of the measured minerals. The low-concentrated peroxides seem to be more reliable considering the mineral loss.

Keywords: acid attack, bleaching, chemical composition, enamel, mineral loss

Responses of L929 Mouse Fibroblasts to contemporary self adhesive restorative materials

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Aim: Resin-modified glass ionomers, reinforced glass ionomers, bioactive materials, which are composite alternatives, are generally used for restoration of deep caries. The biocompatibility of materials that are so close to the pulp is very important. The aim of this study was to evaluate the cytotoxic effects of contemporary self adhesive restorative materials on L929 Mouse Fibroblasts.

Material-Methods: FUJI II LC (GC), EQUIA FORTE (GC), ACTIVA BioACTIVE-RESTORATIVE (Pulpdent), Glass Fill (GCP) and Vitrebond (3M) contemporary self-adhesive restorative material specimens were prepared according to manufacturers' instructions with using standard teflon matrix. Set materials were extracted in culture medium, and cytotoxicity was determined on L929 Mouse Fibroblasts. Cell viability was evaluated with XTT (2,3-Bis (2-methoxy-4-nitro-5-sulfophenyl)-2H-tetrazolium) method. The mean values of control tissues were set to represent 100% viability. Data were analyzed using by oneway ANOVA and Tukey's HSD tests.

The ranking of the least to the most cytotoxic material was: Fuji II LC < ACTIVA BioACTIVE-RESTORATIVE < EQUIA FORTE < Glass Fill < Vitrebond on L929 Mouse Fibroblasts. The original extract concentration of all test materials, 1/2, 1/4 concentrations of Vitrebond and 1/2 concentration of Glass Fill were different from untreated controls ($p < 0.05$).

Conclusion: The influence of the cytotoxicity depended on the materials tested and at high concentration, all test materials are cytotoxic on L929 mouse fibroblasts.

Keywords: restorative dentistry, XTT assay, glass ionomer, bioactive materials, self adhesive

Micro-leakage evaluation of self-adhering flowable composites in class V cavities prepared by different methods

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Aim: Recently, a new category of restorative composites so-called self-adhesive (flowable) which does not require any acid etching or bonding protocol prior to application has been introduced. In dental preparations, usually burs are used. On the other hand erbium lasers provide minimal removal of tooth tissue along with the caries, involve no noise or vibration and reduce the need for local anesthesia. Hence, in this study the success of self-adhesive composite restorations prepared by different methods was evaluated in terms of microleakage.

Material-Methods: Sixty extracted human premolars were used. Specimens were randomly divided into two groups to be restored with Vertise flow and Constic self-adhesive flowable composites. Then divided into three subgroups to be prepared with Er:YAG laser, Er-Cr:YSGG laser and Bur (n=10). Restored specimens were thermocycled 5,000 times between 5-55°C with a dwell time of 30 s and then immersed in 50% W/W ammoniacal AgNO₃ solution. Micro-leakage evaluations were made by using SEM and Stereomicroscope. Data were analyzed by Kruskal-Wallis and Mann-Whitney U tests (p<.05).

Results: More microleakage was observed in cervical regions compared to occlusal regions in all groups (p<.05). No significant difference was observed among all groups in terms of occlusal regions (p>.05) but in cervical regions bur prepared groups showed less micro-leakage than other groups (p<.05).

Conclusions: The evaluated self adhering composites similarly behaved. Laser preparations caused much micro-leakage corresponded to bur preparation.

Keywords: Self-adhering composite, micro-leakage, Er:YAG laser, Er-Cr:YSGG laser

Evaluation of periodontal disease self-report validity of patients attended to Ankara University Faculty of Dentistry

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Aim : The aim of this study is to evaluate the validity of a predictive model that includes self-report measures for periodontitis screening and periodontal awareness with the comparison of data from clinical examination and self-report questionnaires of patients who referred to Ankara University Faculty of Dentistry.

Material and Methods: 350 patients were included in the study. Participants were asked 25 questions, including demographic information, oral hygiene habits, and self-reported measures of periodontal status. Plaque index and gingival index were obtained from Ramfjord teeth in all patients. The CPI measurement was made and the highest score for each sextant was recorded. A pocket depth measurement was made from 4 surfaces of all teeth and recorded with gingival recessions. Logistic regression analysis was used to construct a predictive model.

Results: At the end of the study, it was noted that individuals older than 30 years, men, smokers, only complaints to the dentist, patients who thought that they had gingival recession, and anterior teeth alignment had a higher risk of periodontitis. Self-report measures obtained with these questions were included in the outcome predictive model. Sensitivity and specificity were found as 47% and 63%, respectively.

Conclusions: When considering the results of our study the periodontal measurements we evaluated did not show validity in epidemiological studies. However, the validity of these questions can be tested in studies with larger populations. In addition, our findings suggest that indicator questions about periodontal disease may provide a higher level of predictability for periodontitis when used in combination with previously identified risk factors.

Keywords: Awareness, self report, periodontal disease, predictive model

Evaluation of periodontal and mandibular cortical bone status in children with type 1 Diabetes mellitus: a pilot study

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Aim: Type 1 diabetes mellitus is a chronic metabolic disease with early manifestation predominantly in the childhood. In children with type 1 diabetes, periodontal diseases are significantly higher than that in the healthy population and there is differentiation in osteoblastic and osteoclastic activity bone quality decreases.

The aim of this pilot study is evaluation of periodontal and mandibular cortical bone status using with orthopantomography in children with Type 1 Diabetes Mellitus.

Material-Method: 40 patients which are 20 with type 1 diabetes mellitus and 20 healthy children were included. Periodontal diseases were detected with clinic examination and orthopantomography was take for mandibular cortical bone thickness.

Results: Range of age was 13.10 2.5. 65% of participants were women, 35% of them were men. In children with type 1 diabetes mellitus, periodontal plaque and gingival bleeding indexes were significantly higher than healthy children. ($p < 0.05$) Mandibular cortical bone thickness was 0.307 in children with type 1 diabetes mellitus, 0.333 in healthy children and there was no significantly statistically different between groups.

Conclusion: Oral and bone health are very important for children. In children with type 1 diabetes mellitus, oral examinations and bone development should be followed regularly.

Keywords: bone thickness, type 1 Diabetes Mellitus, children, periodontal diseases

Ultrasonography in determining pubertal growth and bone age

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Aim: The purpose of this study is to evaluate the compatibility of ultrasonographic data with hand-wrist graphs.

Material-Methods: In this study, a total of 120 children from 10 to 17 years old (mean age was 168 months \pm 27.5 months) were performed hand-wrist graphs and ultrasonographic imaging.

Researchers examined the phalanges, sesamoid bone, and radial bone distal epiphysis-diaphysis comparatively in each patient by both imaging methods and statistical evaluation.

Results: There was no statistically significant difference between conventional radiography and USG values at 13 points except for PP1 (proximal phalanges of the first finger), PP2 (proximal phalanges of the second finger), and radial epiphysis ($p > .05$). The CBA (bone age obtained from conventional graphs) of the females was found to be larger than their CA (chronological age) and their UBA (ultrasonographic bone age). For males; the means of the CBA, UBA and CA values close to each other. In females; there was a strong correlation between the CA and the CBA ($r = 0.864$), between the UBA and the CBA ($r = 0.847$), and between the CA and UBA ($r = 0.780$) ($p < .01$). In males; there was a strong correlation between the CA and UBA ($r = 0.891$), between the CA and the CBA ($r = 0.817$), between the UBA and the CBA ($r = 0.745$) ($p < .01$).

Conclusions: Ultrasonography gives detailed information about epiphyseal diaphysis relations. It can be used as an alternative to conventional grafting in the detection of bone age and pubertal growth, owing to the absence of ionizing radiation.

Keywords: bone age, hand-wrist radiography, ultrasonography

Distribution of soft tissue injuries in children with dento-alveolar traumas in Erzurum: a retrospective study

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Aim:

The aim of this study is to evaluate the distribution and the type of soft tissue injuries associated with dento-alveolar traumas in patients who applied to Department of Pedodontics, Faculty of Dentistry, Ataturk University in 2016-2017.

Material and Method:

This retrospective study was carried out by selecting cases with perioral soft tissue injuries from dento-alveolar trauma archives of our department. Types of soft tissue injuries were classified as contusion, abrasion, laceration and penetration. Also, the injury site was determined.

Results:

Patients in this study ranged in age from 2 to 15 years, with an average age of 7.7 ± 3.4 . The results showed that 14 (31.8%) patients had more than one type of soft tissue injury. While, 14 of dento-alveolar injuries involved primary dentition, 29 were involved permanent dentition. Only one patient suffered from soft tissue injuries without having any dento-alveolar trauma. Of the total of 74 soft tissue injuries, 25 (33.8%) contusions, 22 (29.7%) abrasions, 26 (35.1%) lacerations, and 1 (1.4%) penetration injury was observed. Among the soft tissue injuries observed in the lower jaw, floor of the mouth, tongue, lips, gingiva, nose, eye and face, injuries were seen mostly in upper lips (41.9%) and lower lips (24.3%).

Conclusion:

Dentists should have the knowledge and equipment to treat the patients with dento-alveolar trauma and perioral soft tissue injuries.

Keywords: children, soft tissue injuries, statistics and numerical data, tooth injuries

Traumatic dental injuries in children presenting for treatment at the Department of Pediatric Dentistry, Faculty of Dentistry, University of Ataturk, 2016–2017

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Aim: Data pertaining to traumatic dental injuries of children seeking care at the teaching clinics of the Department of Pediatric Dentistry, Faculty of Dentistry, University of Ataturk over a period of 2 years were analyzed.

Materials and Method: The study was based on the dento-alveolar trauma records of patients who applied the department of Pedodontics of Ataturk University Faculty of Dentistry. The children were examined clinically for dental injuries. The following information was recorded: age, gender, etiology, localization, place, number of injured teeth, type of trauma, type of tooth, and treatment provided. Andreasen & Andreasen classification was used in dento-alveolar trauma records.

Results: A total of 247 patients aged 1–15 years presented a total of 436 traumatized teeth. 143 boys (58%) and 104 girls (42%) with a mean age of 8.2 years participated in the study. The peak incidence of injury was 8–10-year age group. The most common type of dental injuries were luxation injuries (37,5%), uncomplicated crown fractures (26.09%), and complicated crown fractures (15.13%). Most injuries involved one tooth (49.8%) and maxillary central incisors were the most affected teeth (50.5%). Also, the most frequent treatment was examination only (27.7%).

Conclusions: Preventive educational program should be instituted in Erzurum, to inform parents and school teachers about the importance of traumatic dental injuries and the benefit of immediate attendance for dental treatment. Also, continuing education programs offering the latest updates in the management of traumatized teeth should be provided for dental and medical practitioners.

Keywords: dental trauma, injury, pediatric dentistry, retrospective study

Panoramic X-Ray Assessment of the First Permanent Molars in the Children 6-9 Years Old in Erzurum

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Aim: The aim of this study is to evaluate the prevalence of necessities of the endodontic and restorative treatments for the first permanent molars in the children who presented at our department of pediatric dentistry.

Material-Methods: This cross-sectional survey consisted of the patients having orthopantomogram (OPG) images, among the 6-9 years-old children who applied to the Faculty of Dentistry, Ataturk University between August-December 2017. The patients with obscured OPGs preventing the assessment of the first permanent molars were excluded and median study age was covered with the data of 433 children (222 girls, 211 boys) with a mean age of $7,69 \pm 0.89$. SPSS 20.0 software was used for data analysis.

Results: In the assessment process, we observed a- 4.6% carries rate in four permanent molars, 8.5% in tree molars, 17.3 % in two molars, and 21.2% in one. And the rate of the children with no carries in first permanent molars was found as 48.3 %. The caries ratio between upper and lower molars were statistically different ($p < 0.05$). We observed a total of 15 molars with periapical lesions all were mandibular. The DMFT value for first permanent molar teeth was observed as 1.12 ± 1.29 .

Conclusion: In regard to the data obtained in the study, due to the high rate of carious lesions observed in the 6-9 year old, we think that the dental practitioners should raise awareness among the parents about the importance of the oral & dental health in the transition from primary to permanent dentition.

Keywords: Children, Caries, First Permanent Molars, Panoramic Radiography

Evaluation of Metals Contained in Dental Implant in the Hair of Dental Implant Patients

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Aim: The purpose of this research, Evaluation of Metals Contained in Dental Implant (titanium (Ti), aluminum (Al) and vanadium (V)) in the Hair of Dental Implant Patients

Material-Methods: Our work consists of a single group consisting of 33 individuals. The amounts of Ti, Al, V in the hair specimens collected before the dental implant application were evaluated. The amounts of Ti, Al, V in hair specimens collected during 6-13 months after dental implant application were evaluated. Minimum 2 maximum 16 implants were applied as the number of implants (contact area minimum 378,62mm², maximum 3264,64mm²). 14 women, 18 men participated in our study. Individuals are between 18-57 years of age and the average age is 43,848. Measurements of elemental levels in hair and specimens from individuals were performed with an Inductive Coupled Plasma Mass Spectrometer (ICP-MS, Agilent 7800). Descriptive statistical methods (mean, median, standard deviation, minimum and maximum values) were used in the evaluation of the data and Wilcoxon Signed and Kolmogorov-Smirnov tests were used during the construction of the statistic.

Results: Despite the increase titanium, aluminum and vanadium elements in the hair, this increase was not statistically significant ($p > 0,05$).

Conclusions: In dental implant (made of grade 5 titanium alloy) patients; The elements of Ti, Al, V accumulate in the hair and for these elements the hair texture can be thought of as a way out of the body.

Keywords: Dental Implant, Ti-6Al-4V, Corrosion, Hair, ICP-MS

Effect of different impacted third molar surgery on quality of life

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Aim: The aim of this study is to evaluate the quality of life and pain status of the patients that underwent two different dental surgery operations.

Material-Method: A total of 60 patients aged between 18-25 were included in the study. In group 1 (n:30) only impacted lower third molar surgery operation was performed. In group 2 (n:30) impacted lower and upper third molar surgery were performed from same side. On days 3, 7 and 14 after surgery, Oral Health Impact Profile (OHIP-14) questionnaire and VAS scoring system were used to assess patients's quality of life and pain status. Mann-Whitney U analyse was used for statistically analyses.

Result: When the questionnaire and VAS scores were evaluated, at the end of the 3rd day after the operation, mean ohip-14 scores in group 1 and 2 were 43.30 and 46.07. Mean VAS scores were 7.13 and 8.07 respectively. No significant difference was found between the groups ($p < 0.05$). On 7th day, mean ohip-14 scores in group 1 and 2 were 35.23 and 39.43. Mean VAS scores were 2.57 and 4.53 respectively. It was observed that there was a significant difference between the groups for both questionnaire and VAS results ($p < 0.05$). At 14th day, mean ohip-14 scores in group 1 and 2 were 20.27 and 21.37. Mean VAS scores were 0.67 and 0.77 respectively. There was no significant difference between the groups ($p < 0.05$).

Conclusion: According to our results extraction of two impacted teeth at the same time effects life quality negatively.

Keywords: impacted molar, life quality, ohip-14

Preventing the Sequelas of Impacted Third-Molar Surgery: Injection dexamethasone into the pterygomandibular space

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Aim: Inflammatory sequelas such as swelling, pain, limited mouth opening, and general oral dysfunction following surgery for impacted third molars can be controlled by various methods. This study aimed to evaluate the efficacy of a single dose of 8 mg dexamethasone injected preoperatively into the pterygomandibular space in reducing discomfort of mandibular third-molar surgery.

Materials-Methods: Randomized, controlled, split-mouth study was designed involving 20 patients and 40 lower bone impacted third molar extractions. The study group received 2 ml of 4 mg/ml (8 mg) dexamethasone injection preoperatively through the pterygomandibular space following local anesthesia; the control group received 2 ml normal saline injection. Pain on a visual analogue scale (VAS), swelling, mouth opening were assessed preoperatively and days of 2nd and 7th postoperatively. Descriptive statistics and the independent-samples t-test were used to assess the significance of difference. $p < .05$ was considered significant.

Results: Pain scores were significantly lower on 2nd postoperative day in the study group. Significant reduction in swelling scores were seen on 2nd postoperative day in the study group. Mouth opening was also significantly greater on day of 2nd in the dexamethasone group ($p < .05$). But did not differ significantly between the groups on the other postoperative days ($p > .05$).

Conclusion: Preoperative injection of dexamethasone into the pterygomandibular space was effective in reducing postoperative pain, swelling, limited mouth opening following impacted lower third molar surgery.

Keywords: third molar surgery, swelling, pain, pterygomandibular space

The effect of preemptive intravenous ibuprofen on the Postoperative edema and trismus in third molar tooth extraction

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Aim: In this study, we aimed to evaluate the antiinflammatory efficacy of pre-emptive intravenous ibuprofen on inflammatory complications such as edema and trismus after inferior 3rd molar surgery.

Methods: Sixty patients, between 20 and 35 years of age, were included in the study. Group 1: 800 mg IV ibuprofen + dexketoprofen. Group 2: 800 mg IV ibuprofen. Group 3: control (placebo) group. All medications started to be given as infusions 15 minutes before the operation. Edema size, mouth openings (trismus) were recorded in all patients preoperatively, postoperatively, and postoperative 48th hour and 1st week.

Results: There was no difference in postoperative measurements between the groups in terms of trismus and edema size ($p > 0.05$). Only tragus - the corner of the mouth on the 2nd postoperative day, measurement was determined difference between group 2 and group 3 ($p = 0.021$). According to the measurement time, in group 3, between preoperative trismus with 2 days trismus difference was found ($p < 0.05$). In group 3, postoperative 2. Day edema was determined increases by the preoperative period ($p: 0.001$). Group 1 and 2, still associated in the postoperative period was significantly increased, but less ($p: 0.001$). Kolmogorov-Smirnov variance analysis, Tukey test, variance analysis in repeated measures and Chi-square test were used.

Conclusion: In this study, intravenous ibuprofen was found to be more effective in alleviating trismus, alone or in combination, and better restricting postoperative edema. Intravenous ibuprofen given preoperatively provided better recovery at all postoperative periods and was found to be more effective especially on the 2nd postoperative day.

Keywords: intravenous ibuprofen, Postoperative edema, trismus, third molar tooth extraction

Clinical diagnoses and mri findings in tmd patients

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Aim: Temporomandibular disorders (TMD) are common and symptoms of TMD are pain, joint sounds, and impaired movement, We know that magnetic resonance imaging (MRI) is the most preferential technique for TMD. But It is not useful for routine clinical practice. The aim of this study was to compare clinical TMD diagnoses and MRI findings of the temporomandibular joint (TMJ).

Material & Methods: This study protocol evaluated patients who have been suspected TMD. 55 patients who underwent MRI examination for TMD treatment or check up examination referred to Department of Maxillofacial Surgery in University of Bülent Ecevit by medical practitioners (49 of them) and dentists (6 of them). A questionnaire about the clinical symptoms of TMD were requested all of patients. Patient histories were taken carefully by the clinician and clinical examinations was performed the patients in department. Patients were assessed about pain, and mouth opening limitation. Findings of clinical examinations were compared with MRI results.

Results: Chi-squared test were used for the differences between groups. In 47 patients (85.45%) clinical examination results were correlated with MR findings. ($p < 0.05$) MR findings of 26 (56.7%) patients were seen normally. Our study showed that MR imaging diagnoses have no effect on clinical diagnoses of TMD patients.

Conclusions: The clinical diagnoses for myogenous pain were not always confirmed by MRI. Further studies with more population are required to determine the effect of MR imaging on TMD patients.

Keywords: Magnetic resonance imaging (MRI), Temporomandibular disorders (TMD), Temporomandibular joint (TMJ)

Central giant cell granuloma associated with neurofibromatosis: case report

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Introduction:

Neurofibromatosis type 1 was first described by Von Reclinhausen in 1882. It is a genetically inherited neurocutaneous disease of unknown origin. Most of the cases were autosomal dominant; some may be mutational. Neurofibromatosis is common in the skin and nervous system. The presence of 6 cafe au lait spots on the skin is pantogonomic for neurofibromatosis.

Neurofibromatosis is a disease that is diagnosed due to oral findings as well as many systems. In this case report, the patient with neurofibromatosis; central giant cell granulomas associated with neurofibromatosis have been demonstrated.

Case:

A 17-year-old male patient was admitted to our clinic with a complaint of swelling in the mandibular premolar region for 3 months. It was learned that the patient had a medical history of NF 1. No caries or periodontal loss was observed in the results of the clinical examination. In the teeth with no.44-45, the vitality test was answered at the normal limits. Biopsy result the lesion from the central giant cell granuloma was completely removed under blunt dissection under local anesthesia and without extraction tooth number 44-45.

Conclusions:

Although oral findings due to neurofibromatosis are not frequent, it is reported that 70% of oral findings were observed in recent studies. Central giant cell granulomas attached to neurofibromatosis are known to be malignant in the literature. Therefore, close follow-up is required in cases of central giant cell granulomas associated with neurofibromatosis.

Keywords: central giant cell granuloma, neurofibromatosis, neurocutaneous

The prevalence of craniofacial fibrous dysplasia among patients undergoing CBCT

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Aim: Fibrous dysplasia (FD) is a rare developmental disease characterized by the replacement of bone marrow with proliferating fibro-osseous tissue. There are three forms of FD, monostotic, polyostotic and associated with McCune-Albright syndrome. One of the more common locations of FD occurrence is the craniofacial region. The aim of this study was to investigate the frequency of craniofacial fibrous dysplasia in patients who underwent CBCT examination for various reasons in our clinic between 2008 and 2017.

Materials and methods: This study was conducted by examining the records of patients who underwent CBCT examination between 2008 and 2017.

Results: In our clinic, fibrous dysplasia was detected in 0,25% (20 patients) of 7942 patients who underwent tomographic examination at 9 years. The mean age of the subjects was $32.35 \pm 20,8$ years (range: 7–77 years); 14 subjects (70%) were female and 6 (30%) were male. 15% (3 patients) were polyostotic, 85% (17 patients) were monostatic type fibrous dysplasia. In 3 patients with polyostatic fibrous dysplasia, lesions were located in maxilla, mandible, zygoma and sphenoid bone. 70,6% (12 patients) of the cases with monostatic fibrous dysplasia were located in maxilla and 29,4%(5 patients) were located in the mandible.

Conclusion: The prevalence of fibrous dysplasia was 0.25% in patients who underwent CBCT. Although histopathology is considered as a gold standard to diagnose any disease entity, radiography particularly CBCT is the best diagnosing tool for craniofacial fibrous dysplasia.

Keywords: CBCT, fibrous dysplasia, fibroosseous lesions

Aspergillosis of the maxillary sinus as a complication of overfilling of root canal material

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Introduction: Aspergillosis of the maxillary sinus is a relatively rare disease in nonimmunocompromised patients. In recent years a number of cases of aspergillosis of the maxillary sinus have been reported in association with overfilling of root canal materials with certain root canal cements. Aspergillosis can be seen asymptotically which is diagnosed at routine radiological examination or can be seen symptomatically which is included nasal secretions, pain, zygomatic swelling and common chronic sinusitis symptoms.

Case Reports: A 39-year-old male patient was referred to our department with a unique appearance of a dense opacity of foreign body reaction in the right maxillary sinus. At radiological examination, CT scans showed overfilling of the root canal materials into the right maxillary sinus. Under general anesthesia patient was operated underwent Caldwell-Luc surgery and overfilling of the root canal material was removed from maxillary sinus, specimen was sent for microbiological examination and aspergillus flavus was diagnosed.

Conclusions: Overfilling into the maxillary sinus with root canal materials has to be avoided; material has to be removed from the sinus because otherwise aspergillosis infection may ensue.

Keywords: Aspergillosis, Caldwell-Luc surgery, maxillary sinus, overfilling

Children's Ages and Reasons for Receiving First Dental Visit

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Aim: This study aimed to assess the average age and the most common reasons for first dental visits in children.

Materials-Methods: By using a questionnaire data were collected from the pediatric patients attending to Gazi University Faculty of Dentistry, Department of Pediatric Dentistry. Only 1555 children attending their first dental visits with no previous dental experience were included in the study. Descriptive statistics, cross-tabulation analysis, and chi-squared test were done. The significance level was set at $P < 0.05$.

Results: It has been seen that the most initial dental visit was in the range of 4-6 years. Dental caries and dental pain were the dominant reasons. Parents preferred oral and dental health centers, followed by university hospitals and the nearest health centers for the first dental visits of the children.

Conclusions: It is striking that children's first visits to the dentist usually take place in compulsory circumstances although it was emphasized that the visit to the first dentist should be done at the age of 6 months-1 year by the Grand Dentistry Academies. We believe that awareness and training activities related to the subject should be developed and disseminated.

Keywords: Pedodontics, preventive, first dental visit

Infective Endocarditis and Practice Essentials: An Update

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Infective endocarditis (IE) is defined as an infection of the endocardial surface of the heart, which may include one or more heart valves, the mural endocardium, or a septal defect. Its intracardiac effects include severe valvular insufficiency, which may lead to intractable congestive heart failure and myocardial abscesses. Infective endocarditis (IE) is uncommon but has high morbidity and mortality. Prevention and early detection are therefore important. Almost 100 years ago, the links between endocarditis and procedures, particularly dental procedures, were declared. Following the inter-relation, first guidelines recommending antibiotic prophylaxis (AP), with the aim of preventing IE developing after procedures, were proposed. However, there has only ever been circumstantial evidence in humans that AP prevents IE. This article outlines the history of AP and reviews the evidence base for the use of AP to prevent IE.

Influence of published news about fluoride in written and visual media on patient parents

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Aim: The aim of this study is; to assess the use of toothpaste and fluoride by individuals, the sources of available information about side effects, the effectiveness of the media in obtaining this information, and how the positive media has changed the ideas in this regard.

Materials-Methods: The study Atatürk University Faculty of Dentistry Pedodontics 50 patients (26female, 24male) who applied to the branch were created with a face-to-face questionnaire with the participation of parents and then with verbal and visual informations. Two months after the informants, the questionnaire's question was redirected to the patient's parents. Parents' pre-and post-training ideas were compared with each other. Data were evaluated by chi-square test in SPSS 20.0 package program, $p < 0.05$ value was considered significant.

Results: 37% of those surveyed were in the age range of 30-49, forming the majority of the slice. They said that 48% of the interviewers spend 1-3 hours per day on communication and communication tools, 24% on the internet about the current issues, and 35% believe that communication and communication tools are mostly partly reliable. In the first questionnaire, the rate of responding correctly to questions about fluoride and toothpaste was 22%, whereas it was 44% after two months.

Conclusion: It is inevitable for individuals to be influenced by written and visual media. Unsupervised publication of health-related news that will affect the lives of individuals can have negative consequences. For this reason, as in the other fields, dentistry can be a media tool when the society is properly informed by the authorized institutions.

Keywords: Fluoride, media fluoride news, survey study

Four years follow-up with dmft/DMFT index scores of the pediatric dental patients treated under general anesthesia: A retrospective study

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Aim: General anesthesia is the final solution for children who need special health care and children who have dental behavior management problems. In this study we aim to compare dmft/DMFT index scores before and four years after the treatment under general anesthesia.

Material-Method: This retrospective study included pediatric dental patients treated under general anesthesia in 2014 at Ataturk University Faculty of Dentistry Pediatric Dentistry Department. A total of 37 patients (n=6 disabled and n=31 healthy) baseline DMFT/dmft index scores and four-year follow-up DMFT/dmft index scores had been noted. All statistical analyses were performed with SPSS.

Results: Patients mean age was 9.8 ± 1.6 (minimum:7, maximum:14). When we examined healthy and disabled patients separately; there was no statistically significant difference in DMFT scores in disabled patients; however, interestingly, a significant increase in DMFT scores from 0.26 to 0.84 in healthy patients was detected. 15 patients in primary dentition and 3 patients in mixed dentition had changed their dentition stage.

Conclusions: For dental behavior management problems or those with special health care needs, dental treatment performed under general anesthesia is efficient and beneficial by decreasing the dmft index scores, improving oral hygiene and reducing to rate of new caries.

Keywords: DMFT index, general anesthesia, pediatric dentistry, retrospective study

All Impacted Teeth Are Pathology Sources?

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Objective: Retrospectively scanned cone-beam computed tomography (CBCT) sections are used to detect impacted teeth and to determine the frequency of these impacted teeth causing pathology.

Materials-Methods: Within the scope of the study, CBCT sections of 608 patients (307 males and 301 females) were screened. Impacted teeth detected were classified as incisive, canine, premolars, molar, supernumerary and third molar. Pathologies caused by impacted teeth are classified as caries, cyst, tumor; adjacent teeth root resorption and periodontal destruction.

Results: Impacted teeth were detected in 34.37% of the 608 tomographic images included in the study. The distribution of impacted teeth was 9.4% incisive, 29.4% canine, 9.9% premolar, 2.9% molar, 9.3% supernumerary teeth and 39.9% to third molar. Periodontal destruction is the most commonly caused pathology by impacted teeth, and the tooth that frequently caused this pathology was identified as mandibular right third molar.

Conclusion: There is no general approach to assessing the impacted teeth. Each case should be assessed according to its own situation. If the impacted teeth do not cause pathology, they can be controlled by time. In suspected cases, it can be clearly assessed with CBCT.

Keywords: impacted teeth, cbct, pathology

Evaluation of the oral care habits and gum disease awareness, taking necessary measures for needs

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Aim: Periodontal diseases are one of the most common oral pathologies in a worldwide. The aim of this cross-sectional study was conducted to understand periodontal status and disclose the relationship between demographic data and personal hygiene habits.

Material & Methods: In this study, demographic and socio-economic data, smoking, systemic health and oral hygiene habits were evaluated at 100 patients who Ataturk University Faculty of Dentistry, Department of Periodontology. Individuals were evaluated between the ages 18-66. They were given a questionnaire containing 21 multiple-choice questions. A structured questionnaire was used to gather information about practices and awareness about oral hygiene. The periodontal status was evaluated by CPITN indexes. Data were analyzed using a SPSS statistical program and Pearson correlation.

Results: When periodontal status was investigated, 85% of the cases had periodontal problems. Pearson correlation test was applied. Thus, a correlation was observed between tongue brushing habits and CPI values ($p < 0.05$). CPI values negatively correlated education level and tooth brushing frequency ($p < 0.05$). The tooth brushing habits and frequency of replacing a new toothbrush were correlated tongue brushing habits ($p < 0.01$).

Conclusions: According to the findings in this study, all the patients comprised in the study had gingivitis or periodontitis at various grades, as well as periodontal treatment and oral care training for all patients seems necessary. Actually, there were a study group consisted of patients who applied for treatment of the dental faculty and the absence of healthy individuals from periodontal treatment is a limitation of our study.

Keywords: Oral hygiene awareness, Periodontal diseases, oral health, motivation

Hereditary dentin dysplasia type Ic: two case reports

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Background: Dentin dysplasia (DD) is a rare autosomal-dominant disturbance of dentin formation characterized by abnormal pulpal morphology. This disturbance is characterized by short-rooted teeth with sharp conical apical constrictions and an aberrant growth of dentine. In these case reports, we aimed to present the extraoral, intraoral, and radiographic findings of twin sisters.

Case Reports: Cases I and II are monozygotic twins. These sisters were brought to our clinic by their family because of the mobility in their incisor teeth. Based on clinical and radiographic findings, these twin sisters were diagnosed with DD type I, subtype Ic.

Conclusion: There are three different identified types of DD and DD type I has four subtypes. DD type I should be differentiated from DD type II, dentinogenesis imperfecta (DI), and regional odontodysplasia (ROD). Treatment varies from patient to patient, depending on the severity of root malformation. The goal is to bring the teeth to proper occlusion for both function and aesthetics.

Keywords: Dentin dysplasia, pulpal obliteration, radicular dentin dysplasia

Transverse Strength of Acrylic Denture Base Resin Repaired with Different Powers of Er:YAG Laser

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Aim: The aim of this study was to investigate the transverse strength of a conventional heat-polymerized acrylic resin after the repair surfaces were treated with different powers of Er:YAG laser.

Materials-Methods: 160 rectangular-shaped acrylic resin specimens were prepared using a custom mold and divided into 4 groups according to different surface treatment methods; Group 1 (control): no treatment, Group 2: 2W (10 Hz) Er:YAG laser application, Group 3: 3W (10 Hz) Er:YAG laser application and Group 4: 4W (10 Hz) Er:YAG laser application. Following the surface treatments, the repaired surfaces were examined using Scanning Electron Microscopy (SEM). Then, the specimens were repaired with autopolymerizing acrylic resin to form a total of 80 (n=20/group) rectangular-shaped (65×10×3.3 mm) test specimens. The transverse strength of specimens was measured by a three-point bending test using a universal testing machine. The data were analyzed by using one-way ANOVA and Tukey HSD tests. The results were considered significant for $\alpha=0.05$.

Results: All Er:YAG laser treated groups revealed significantly higher transverse strength values compared to the control group ($p<0.05$). The highest transverse strength values were found in specimens of Group 2, the lowest transverse strength values were found in specimens of control group ($p<0.05$). No significant differences were found between Group 3 and Group 4 ($p>0.05$).

Conclusion: Er:YAG laser application increased the transverse strength of heat-cure acrylic resin repaired with autopolymerizing acrylic resin. Especially, 2 W (10 Hz) Er:YAG laser application is more effective in increasing the transverse strength of acrylic resin.

Keywords: Acrylic resins, Er:YAG lasers, Denture repair

An evaluation of dental students' motivations to specialize in prosthodontics

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Aim: The aim of this study is to determine the opinions of the students at Faculty of Dentistry about dentistry, the factors affecting their career choices, and the views regarding specializing in prosthodontics to provide ways to increase their motivation in this area.

Materials-Methods: A 10-question survey was prepared and given to the students at Atatürk University Faculty of Dentistry. 105 fourth and 110 fifth grade students participated in the survey. The answers were statistically analyzed with Chi Square test.

Results: 215 of the fourth and fifth grade students who were studying in 2016-2017 academic year participated in this survey. 110 of them were female and 105 of them were male. 105 of the participants were fourth grade students and 110 of them were 5th grade students. 75.3% of the respondents stated that they were first exposed to Prosthodontics in the preclinical period. 60.5% of the participants reported that they were most affected by the clinical experiences during the introduction period of Prosthodontics. In addition, students report a positive opinion of 30.2% about the future need for the Prosthodontics.

Conclusion: According to our study results, the first perceptions of students about dentistry started to occur in their preclinical period; their clinical experiences and the influence of the faculty members have been found to be effective in their career choices.

Keywords: Department of Prosthodontics, Prosthodontist, The Specialization Exam in Dentistry

Effects of caffeic acid phenethyl ester on anti-rankl and anti-opg levels on experimental periodontitis in rats

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Aim: The aim of this study was to investigate the effects of the systemic caffeic acid phenethyl ester administration on anti-RANKL and anti-OPG levels in experimental periodontitis in rats.

Material-Methods: Thirty male Sprague Dawley rats were divided into three groups: control, endotoxin-induced periodontitis (EP), and EP treated with CAPE (EP-CAPE). Endotoxin was injected into the gingiva of test rats on days 1, 3, and 5, whereas saline was injected control rats. EP-CAPE group received 10 mmol/kg/day CAPE intraperitoneally for 28 consecutive days. Saline was given in the control and EP groups in the same manner. At the end of the study, and rats were sacrificed. Anti-RANKL and anti-OPG levels was analyzed with stereological analyses.

Results: Anti-RANKL cell levels were found statistically higher in EP group than control group and EP-CAPE group ($p < 0.05$). Also, anti-OPG cell levels were determined statistically lower EP group than control group ($p < 0.05$). However, anti-OPG levels were not statistically different between the EP and EP-CAPE groups ($p > 0.05$).

Conclusion: This study reveals that CAPE treatment reduces anti-RANKL levels and thus may inhibit the RANKL-induced bone loss in experimental periodontitis rat model. This study was supported by Pamukkale University.

Keywords: CAPE, periodontitis, anti-RANKL, anti-OPG

Effect of using ibuprofen on single-tooth implant surgery, placebo controlled, randomized clinical study

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Aim: This study investigated the efficacy of ibuprofen protocol for pain prevention or control after surgical implant placement

Material-Method: This prospective, placebo-controlled, randomized clinical trial included 40 dental implant patients. The patients were assigned to receive one of 2 different protocols: 1) 600 mg ibuprofen 1 hour before surgery and another 600 mg 6 hours after the first dose; 2) or 3) placebo. Rescue medication (1000 mg acetaminophen) was made available to each patient, and they were instructed to take it as necessary. Pain intensity was evaluated via a 101-point numeric rating scale and a visual analogue scale hourly for the first 8 hours after surgery and three times a day for the third and seventh days. **T-test and Mann Whitney U were applied data by SPSS program.**

Results Ibuprofen group was significantly reduced pain at all data which was taken on first 8 hours, third and seventh days. ($p < 0,05$) first day's mean scores for ibuprofen group was (1-8 hours): 40/39/34/31/27/24/19/20 3. day scores: 13/10/9 7. day scores: 3/ 1.17/ 1.60 For placebo group: 1. day (1-8 hours): 54.9/54.4/ 54.9/ 52.650/ 49.3/43.7/35.8 3. day scores: 24,9/23,05/20,35 7. gün: 8.60/5.50/4.95.

Conclusion: Ibuprofen is a commonly used non-steroidal anti-inflammatory drug after dental surgery. We tried to show the effect of this drug with a placebo group at single-implant surgery

Keywords: dental implant surgery, ibuprofen, post operative pain, visual analog scale, placebo

Effect of laser and ozone application on shear bond strength of different fissure sealants

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Aim: The purpose of this study was to evaluate the shear bond strength of different fissure sealants to enamel treated with laser and ozone application.

Materials-Methods: Freshly extracted, non-carious third-molars were used in this study. The roots were removed and the crowns were buccolingually sectioned. Ninety flat enamel surfaces were prepared by using Sof-Lex discs. The human enamel samples were divided into nine groups (n=10): Group 1:Primer(Pr)+BeautiSealant(BS) (control); Group 2:Nd:YAG Laser(Ls)+Pr+BS; Group 3:Ozone(Oz)+Pr+BS; Group 4:Polyacrylic acid(PAA)+Fuji Triage Capsule(Tr) (control); Group 5:Ls+PAA+Tr; Group 6:Oz+PAA+Tr; Group 7:Phosphoric acid(PA)+Grandio Seal(Gs) (control); Group 8:Ls+PA+Gs; Group 9:Oz+PA+Gs. After 24 hours in distilled water, the shear bond strength (SBS) was determined with a universal test device (Instron 3344). Recorded data were analyzed using the analysis of variance (ANOVA) and Tukey's test at a significance level of 0.05.

Results: Fuji Triage showed significantly lower SBS when compared to the Grandio Seal and BeautiSealant. The means and standart deviations(MPa) SBS of control groups were Group1:9.03±5.08, Group4:4.52±1.85, Group7:11.57±4.25. Acid etching groups showed significantly higher SBS than the laser and ozone treated groups (p < 0.05). The means and standart deviations(MPa) SBS of laser and ozone treated groups were Group2:6.89±4.40, Group3:6.06±4.28, Group5:1,51±1.76, Group6:2.21 ±1.59, Group8:6.65 ±2.43, Group9:6.42±2.43. However, the difference between Nd:YAG laser and ozone treated groups was not statistically significant (p> 0.05).

Conclusions: Laser and ozone application before pit and fissure sealant placement negatively affected the SBS of the fissure sealant.

Keywords: Fissure sealant, Nd:YAG Laser, Ozone, Shear bond strength

Dental Caries and Tooth Wear in a Byzantine Population (7-10th Century) Constantinople

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Aim:

As teeth are one of the most enduring parts of an individual after death, they provide good material for palaeodental research. The dental status of the ancient populations enables us to evaluate their nutritional, cultural and socio-economical progress throughout different historical periods. The aim of this study is to determine the frequency of dental caries and tooth wear in the mediaeval Byzantine population of 7-10 the century in Yenikapı, Constantinople, İstanbul.

Material and Methods:

The research was carried out on the skeletal remains of 32 individuals. All available skulls were analysed regardless to the level of damage and teeth were evaluated according to the carious lesions and degree of dental wear. A total of 412 teeth were evaluated whereas the majority 93% were permanent teeth.

Results:

The frequency of antemortem tooth loss in the sample was 2.9 % and the frequency of carious lesions was 8,2%. The total number of carious lesions was 14 (7,48%) for maxilla and 17 (8,67%) for mandible. The carious lesions were observed as superficial and the location of the lesions were mostly recorded as occlusal, followed by interproximal caries. The majority of the sample 92,2% showed a degree of dentin clusters due to attrition. The mostly affected teeth were molars and anterior teeth respectively.

Conclusion:

The research confirms that the study of physiological and pathological changes in the dental systems of ancient populations serves as important resource for evaluating their nutritional way and life conditions. The caries and tooth wear competency might be the reason of the superficial carious lesions and less caries experience throughout this population.

Repair bond strength of resin composite to three CAD/CAM ceramic materials using different repair systems

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Aim: The aim of this study is to evaluate the repair bond strength of a nanohybrid resin composite to three CAD/CAM ceramics using different intraoral ceramic repair systems.

Materials-Methods: Three CAD/CAM ceramic materials (Lava Ultimate, Cerasmart and Vita Blocks Mark II) were selected for the study. Thirty-two specimens (5x5x6 mm) were fabricated from each ceramic. Specimens were randomly divided into eight groups for the following different intraoral repair systems: Group 1: control group (no treatment); Group 2: 35% phosphoric acid etching; Group 3: Z-Prime Plus System; Group 4: CoJet System; Group 5, GC Repair System; Group 6: Cimara System; Group 7: Porcelain Repair System and Group 8: Clearfil Repair System. Then, nanohybrid resin composite (Tetric Evo Ceram) was packed onto treated ceramic surfaces. The specimens were thermocycled before application of repair systems and after application of composite resin. After second thermal cycling, blocks were cut into bars (1x1x12 mm) for microtensile bond strength tests. Data were analyzed using One-way analysis of variance ANOVA and Tukey's HSD test ($\alpha=0.05$).

Results: Cimara System, Porcelain Repair ve Clearfil Repair repair systems significantly enhanced the bond strength of nanohybrid resin composite to all CAD/CAM ceramics when compared with the other tested repair systems ($p<0.05$). In terms of CAD/CAM ceramics, the lowest values were observed with Vitablocks Mark II groups ($p<0.05$).

Conclusion: All repair systems tested increased the bond strength values between ceramics and composite resin.

This work was supported by the Research Fund of Ataturk University (Project number: 2015/315).

Keywords: Bond strength, CAD/CAM materials, Composite resin, Repair systems

The relationship between the oral microbiome and the gut-brain axis: a review of the literature

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Aim: Gut-brain axis set to become a vital factor in understanding general health and disease as a result of being responsible of homeostasis. Recent findings regarding gut- brain axis have led to figure out the relationship between intestinal microbiota and immunity. Within the next few years, the relationship between intestinal microbiota and immunity is likely to become an important component in oral health and diseases too, because the researchers have seen the microbiotas in the oral cavity and gut are likely common. Previous work has mostly focused on gut microbiota and the characteristics of oral microbiota have not been dealt with in depth. Our knowledge of microbiota is still largely based on very limited data. The aim of this report was to call attention bidirectional communication between the gut microbiota and the brain and possible effects of oral microbiota to this link.

Material Methods: Searches were performed in PubMed database. The keywords were 'gut- brain axis', 'gut-brain axis and oral microbiome', 'the human microbiome project', 'the oral microbiome project'.

Results: The goal of these studies relies on the idea of an accurate characterization of the microbiome and its functionality can support new diagnostic, prognostic and therapeutic strategies for hosts.

Conclusions: It is clear that the microbiota can significantly concern the human immune system, the initiation of symbiosis and protection of oral health, especially during prenatal, early postnatal, and adolescence phases appears to be a crucial step for optimizing general health.

Keywords: gut-brain axis, gut microbiome, health and disease, oral microbiome

POSTER PRESENTATION ABSTRACTS



Anterior open bite and oral habits in toddlers

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Aim. To assess the prevalence of anterior open bite (AOB) in toddlers and the relationship between AOB and oral habits (OH).

Material & methods. Cross-sectional retrospective study on a sample of 160 toddlers (88 boys) aged 1-3 years (mean age = 2.26 ± 0.64 years) attending 2 nurseries from Ploiești (Romania). Data was obtained from medical files and clinical examination. Prevalence and distribution of AOB and OH (pacifier, lower lip sucking, tongue thrusting) were assessed. Statistical analysis was performed using ANOVA, correlations and independent t-tests ($p < 0.05$).

Results. a) 89 (55.62%) children had neutral occlusion and 71 (44.38%) had malocclusions; b) 26 (16.25%) children had AOB, representing 36.62% of all malocclusions; c) gender distribution of AOB: 19.32% boys, 12.5% girls (NS); d) age distribution of AOB: 7 (17.07%) – age 1 year, 15 (16.48%) – age 2 years, 4 (14.28%) – age 3 years (NS); e) 32 (20%) of all toddlers (20.45% boys, 19.44% girls) had non-nutritive OH; f) occlusion of children with non-nutritive OH: 50% - AOB; 28.12% - neutral; 21.88% - deep bite; g) 16 (61.54%) of children with AOB and 16 (11.94%) of those without AOB had non-nutritive OH (SS, $p = 0.000$); h) OH in children with AOB: 12 (75%) – pacifier, 2 (12.5%) – pacifier and lower lip sucking, 1 (6.25%) – pacifier and tongue thrusting; 1 (6.25%) – lower lip sucking.

Conclusions. No relationship was found between anterior open bite and toddlers' age/gender but there was a correlation with non-nutritive oral habits. Anterior open bite was strongly associated with pacifier sucking. Early orthodontic check-ups and monitoring are recommended for efficient management of function-related malocclusions.

Special Olympics Special Smiles in Romania – effectiveness over a decade

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Aim: Special Olympics - Special Smiles (SO-SS) programs provide oral screenings for mentally challenged athletes and adapted oral health education both for athletes and their caregivers. To assess the effectiveness of SO-SS in Romania over a decade (2006-2016). **Methods:** Romanian SO athletes were examined under field conditions, during SO competitions. Demographic data (age, gender), dental status (sound, decayed, filled, sealed, extracted) and periodontal conditions were individually recorded. DMF-T and restoration index $RI = [F/(F+D) \times 100]\%$ were calculated. Data from 2006 (n=293, aged 8-27 years) and 2016 (n=249, aged 6-44 years) were compared using SPSS 20.0.

Results: Caries free athletes: 13.3% (2006) versus 23.7% (2016). DMF-T: 5.84 (2006) versus 7.76 (2016). RI significantly increased ($p < 0.01$) from 10.07 (2006) to 25.75 (2016). Percentage of subjects with $RI \geq 80\%$: 3.6 (2006), compared to 17.2 (2016). 79.4% of the athletes examined in 2006 had $RI \leq 10\%$, compared to 59% in 2016. In 2006, 2% of the examined athletes had sealants, versus 4.4% in 2016. 50.5% of the 2006 subjects had gingivitis versus 73.5% in 2016.

Conclusions: Oral health of Romanian Special Olympics athletes has improved over the past decade. Their dental treatment needs tend to be better managed now than in the past. Mentally challenged people still have relatively poor oral health and limited access to dental treatment in Romania. More targeted programs are needed in order to raise awareness, to prevent oral disease and to improve access of mentally challenged people to effective professional oral care.

Keywords: mentally challenged, oral health, Special Olympics

The relationship between the knowledge and attitude towards prevention among final-year dental students at Istanbul University

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Aim: Dental students' knowledge and attitudes towards prevention can provide the framework for their future practices and professional work. The aim of this cross-sectional study was to determine the relationship between the knowledge and attitude towards prevention among final-year dental students at Istanbul University.

Methods: Data were collected from a convenience sample of 126 dental students using questionnaires including a sociodemographic section, the Professional Preventive Knowledge Scale and the Attitudes Scale towards prevention. Data were analyzed using descriptive statistics, t-test, and Pearson's correlation coefficient. The 15-item Professional Preventive Knowledge Scale was developed for this study through reviewing published literature and it is based on a 5-point Likert scale. The Attitudes Scale towards prevention consisted of 8 items, which are rated on a 7-point Likert scale.

Results: A total of 126 students (22.79 ± 1.14 mean age) completed the questionnaire and 63 percent of the respondents were female. No significant gender difference was found in total knowledge scores ($p > 0.05$). Female students had significantly more positive attitudes towards prevention than male students ($p = 0.016$). Significant correlations were found between knowledge and attitudes scores ($r = 0.387$; $p < 0.001$). The Professional Preventive Knowledge Scale and the Attitudes Scale towards prevention showed satisfactory internal consistency (Cronbach's $\alpha > 0.70$).

Conclusion: The level of knowledge towards preventive practice of dental students should be improved through the integration a more comprehensive preventive dentistry program into dental curriculum.

Keywords: dental students, knowledge, attitude, prevention

Evaluation of Dental Anxiety in a group of Children: A pilot study

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Aim: Dental fear is a key factor that may cause patients to avoid, delay or cancel dental appointments. Dental fear in children measure using various behavioral ratings during dental visits, such as Facial Image Scale(FIS), which is the most widely used scale for children. Aim of the present study is to evaluate dental fear in children in different age group during first dental visit using FIS.

Methods: The sample comprised 99 children (45 girls and 54 boys) mean age 8.56 ± 1.84 years, (range 6 to 12), at the Department of Pediatric Dentistry, Dental School, in Istanbul, Turkey. For evaluation of dental fear in children, Facial Image Scale(FIS) was used. The data obtained through the questionnaire were entered into Excel Sheet and statistical analysis was carried out using Chi-square test.

Results: The mean FIS score was 2.43 ± 1.44 for all study population. The FIS values in girls and boys were 2.29 ± 1.29 and 2.56 ± 1.55 respectively. No significant differences in fear scores between boys and girls were found in the present study ($P < 0.05$). In FIS, the maximum respondents out of the sample population (34.3%) showed FIS score 1 as happy. Since the choice of FIS 4 and 5 was considered to be indicative of dental fear in children, 29.3% of children were found to have dental fear according to FIS.

Conclusion: Dental anxiety is a serious problem which negatively affects the oral health of children and adults. Early detection of the causes of fear is very important in the solution of the problem.

Keywords: Dental anxiety, Dental Fear, CFSS-DS, Parental Anxiety

Assessment of Knowledge and Attitudes of Parents about Application of Fluoride Varnish in School-based Programme

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Aim: The purpose of this study; is the assessment of attitudes of parents in two different socio-economic classes about the topical fluoride application programme which carried out by the Ministry of Health with the knowledge and also view on topical fluoride applications.

Method: Parents of 1st and 2nd grade children at Bayrampaşa Elementary School and ITU Development Foundation Schools included to the study. The data obtained using the questionnaire and than were evaluated.

Results: Parents of the 60 children in the public school 68%(n=41), gave permission for their children to apply topical fluoride in school, while 43 %(n=30) of the 70 parents in the private school. Sixteen percentage(n=3) of the parents of the children who did not allow the application of topical fluoride in the public school stated that they were not adequately informed about the application, 26%(n=5) of them did not think it was done in the appropriate environment and 26%(n=5) of them think that fluoride is toxic.

Eight percentage(n=3) of the parents of the children(n=40) who did not allow the application of topical fluoride in the private school stated that they were not adequately informed about the application, 20%(n=9)of them did not think it was done in the appropriate environment and 43%(n=17) of them think that fluoride is toxic.

Conclusion: The community based oral health programmes as topical fluoride applications, which play an important role in preventive dentistry. This study shows a lack of knowledge about fluoride among parents should be informed fluoride application procedures

Keywords: topical fluoride application, preventive dentistry, fluoride varnish

Evaluation of success of the Primary Molar Teeth Treated With Hall Technique: 12-month follow-up

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Aim: In this study, it's aimed to evaluate 12-month of clinical-radiographic success of primary molar teeth treated with Hall technique.

Material-Methods: 30 patients who were healthy, 5-6-year-old, had Class I occlusion and the maximum number of primary molar teeth with deep dentin caries that didn't reach the pulp on occlusal surface were 5-6, with score of 2 on Frankl scale, appropriate for study standards and visited Suleyman Demirel University for treatment were included. Necessary permissions were obtained. Patients weren't treated with local anesthesia and rotating devices. Active caries lesion on occlusal surface of the primary molar teeth of 30 pediatric patients with clinical and radiological indications were removed with an excavator in form of a spoon, placed a stainless steel crown, checked by radiography and glued with glass ionomer cement.

Results: In clinical evaluation of 30 patients treated with Hall technique at the end of 12-month evaluation with 3-month intervals, it was seen that the teeth which were placed the stainless steel crown were functional, gums were healthy, all crowns were seen in the mouth successfully, and the patients had no complaints. In addition, radiographical evaluation didn't reveal any pathological conditions including external-internal root resorption, radiolucency in bifurcation region, enlargement in periodontal space or ectopic eruption of first permanent molar adjacent to the stainless steel crown. It has been seen that oral hygiene of patients were better.

Conclusion: Results of the study demonstrate that, in 12-month evaluation of correctly indicated primary molar teeth which treated with the Hall technique were clinically and radiographically successful.

Keywords: Glass ionomer cement, Hall technique, Primary teeth, Stainless steel crown

Assessment of parents' approaches about preventive dental practices in Erzurum

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Aim: The purpose of this study is to evaluate the preventive dental practice knowledge of the parents who applied to our department with their children.

Material-Method: This survey study included parents of 303 children (156 girls-147 boys) who applied to Ataturk University, Faculty of Dentistry, Pedodontics Department due to different dental complaints. The mean age of the children was $8 \pm 2,7$ years (min=4, max=14). Survey questions included tooth paste, fluoride, and fissure sealant topics. SPSS 20.0 software was used for data analysis.

Results: Parents had taken into consideration the beneficial effects of tooth pastes over gingival health when choosing the type of tooth paste (43,5%). Sources of parents knowledge about fluoride application lead to a significance difference in their acceptance of the application of this kind of treatment to their children ($p < 0,05$). It was also found that parents that had knowledge about fissure sealants (14,6%) were found to be more prone to accept fissure sealant application in comparison to parents that were uncertain or didn't accept this kind of treatment ($p < 0,001$).

Conclusion: According to data obtained in this study, it has been concluded that most of the parents did not have enough knowledge or had been misinformed about preventive dental practices. it is advisable that parents should be properly informed by dentists about the current approaches in preventive dentistry through the written and visual media.

Keywords: Pediatric Dentistry, Survey, Flouride, Fissure Sealant, Tooth Paste

Comparison of oral hygiene habits of research assistant dentists, dental students and dentist working at oral and dental health care center (Survey Work)

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Protective dentistry is the basic step for oral and dental health. The first consideration in this point is the daily oral hygiene habits. It is generally thought that dentists are motivated to protect their oral and dental health well. The purpose of the questionnaire is to evaluate the oral hygiene habits of the dentists and dental students in a comparative way.

The questionnaire survey was carried out on 200 people, 50 research assistants dentists (group1), 50 3rd and 5th grade dental students (group2-3) and 50 dentists working at Oral And Dental Health Center (group4). 12 questions were asked about oral hygiene habits and the answers were classified into 3 categories. Data from the 4 groups were analyzed using the KiKare Independence test.

According to the results obtained, this ratio is decreasing from the groups 4th, 3rd and 2nd respectively, while the duration of toothbrushing, the frequency and the methodology used are more attention paid to the group 1st. The use of electric toothbrush is more of groups 1st and 4th. Regular dental floss, interface brushes and mouthwash use don't differ significantly between groups. Oral hygiene trainings given by dentists are considered sufficient by group 2nd, but this rate is not considered enough by groups 3rd,4th and 1st respectively.

As a result, the oral hygiene habits described by the dentists are not adequately implemented by dentists and dental students. Statistically significant differences were found in the answers given to the questionnaires as a result of the research among the 4 groups.

Keywords: oral hygiene habits, questionnaire, research assistant dentist, dental student

12 month follow-up of the restoration of the primer maxillar incisor teeth conducted under anesthesia by composite short post technique

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Aim: The evaluation of clinical and radiological success of 3, 6 and 12 months of short post restorations done with composites of overdose lost upper incisor teeth frequently encountered in young children under general anesthesia.

Material & Methods: Composite short restoration teeth conducted on 50 incisor teeth from 15 patient whose age range is 2 to 6, and whose primer maxillar incisor teeth showed excessive mass lose due to tooth decay were included in the study.

Treatment of the patients was performed under general anesthesia, and after the canal treatment restoration was completed by placement of the light curing composite by incremental technique of the teeth attaching the matrix of the meba. After that, clinical and radiological follow-up was done.

Results: Clinical and radiologic success rates of treated teeth at 3, 6 and 12 months were 81.6%, 67.7% and 67.7%, respectively.

Conclusion: Nearly all of the cases that failed at the end of 12 months showed that the level of caries was at the gum level and that this technique was the most important criterion for success, it has been observed that success is associated with residual tooth structure and that cheap, fast and aesthetic restorations can be made in teeth with appropriate indications.

Keywords: short post technique, composites, caries, maxillary incisor teeth

Investigation of the self-reported attitude of dentists towards fluoride applications

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Aim: The purpose of this study is to determine the approaches of the dentist about fluoride applications among the preventive treatment options.

Methods: The study was a questionnaire based cross-sectional survey including 20 items and divided into two sections and the participating dental practitioners were asked to answer and complete a questionnaire about: i) Dentists demographic data: Gender, age, graduation year, graduated university, specialty, years in practice, working place ii) Dentists attitudes to prevention: Approach to preventive dentistry and use of fluoride applications. Data entry and analyses were performed using SPSS statistical software. Data were analyzed using frequency counts, percentages and Chi-square test.

Results: A total of 481 voluntary dentist (355 (73.8%) female; 126 (26.2%) male) responded. The sample consisted of 332 general dentist (69%), 149 specialist dentist (31%). 380 (79%) dentist were applying preventive applications. 452 dentists (94%) point out that fluoride is effective in preventing caries. 235 dentists (48.9%) are thinking that fluoride has a side effect. Statistically significant differences were found between female and male dentist according to the anti-caries affect of fluoride ($p=0.005$) and applying protective applications ($p=0.010$). Dentists over the age of 50 apply protective applications (66.7%) statistically significantly less than dentists in other age groups ($p=0.019$). General dentists (87.7%) reported that they were performing protective treatment than specialists ($p=0.0001$).

Conclusion: It was found that preventive practices are on the secondary plan for especially specialist dentist because of they have given priority to their speciality. Keeping up-to-date ongoing training and information about preventive practices will change the dentists approach to the preventive practices.

Keywords: Fluoride, preventive dentistry, dentist

Investigation of education level of clinical and preclinical students of dental Faculty of Atatürk University about HIV and AIDS

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Aim: This study aims to evaluate the knowledge and attitudes on Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) of Atatürk University faculty of Dentistry students. The aim of this descriptive study was to evaluate the knowledge and attitude of the third-year, fourth-year and fifth-year students (n=282) of Ataturk University Dentistry Faculty concerning HIV/AIDS.

Materials-Methods: A questionnaire including 10 questions was used to evaluate the dental students knowledge levels, awareness and attitudes towards HIV/AIDS(n:282). Pearson's Chi-square test was used for statistical analysis of data. $p < 0.05$ was set significant. The questions were selected based on a review of previous studies. Data was collected from the students in face-to-face interviews.

Results:

This study showed that clinical students do not have enough knowledge about AIDS. Though lack of knowledge HIV was found to be high among all participants, pre-clinic and fourth year students appeared to be less knowledgeable about HIV than fifth-year students.

Conclusion: It was concluded that most students have unsatisfactory knowledge on how HIV/AIDS is transmitted, and a lack of information and sources on HIV/AIDS was found to trigger inaccuracy. According to these findings, efficacious education programs should be prepared to establish positive attitudes to HIV/AIDS patients, especially for the preclinical students.

Keywords: AIDS, HIV, Knowledge, Questionnaire

Inter- and intra-examiner agreement of occlusal caries assessment using International Caries Detection and Assessment System

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Aim: The aim of this in vitro study was to evaluate inter- and intra-examiner reliability of occlusal caries assessment using International Caries Detection and Assessment System (ICDAS-II).

Material-Methods: The occlusal surfaces of 55 permanent molar teeth, varying from ICDAS scores 0 to 6 were examined by two experienced, trained and calibrated investigators. All visual examinations were conducted under standard conditions. Examinations were repeated after one week from the initial examination. Cohen's Kappa statistic was utilized to evaluate results of inter- and intra-examiner agreement.

Results: Inter-examiner agreement was found to be very good (Kappa values=0.81). Intra-examiner agreement was moderate for the both examiners (Kappa value of 0.55 for examiner 1 and Kappa value of 0.58 for examiner 2).

Conclusions: This study demonstrated very good inter-examiner reliability and moderate intra-examiner reliability for occlusal caries detection using the International Caries Detection and Assessment System (ICDAS-II).

Keywords: caries, ICDAS, inter-examiner, intra-examiner, reliability

Evaluation of antibacterial efficiency of chlorhexidine varnish and fluoride varnish on biofilm: In-situ

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Aim: This was to evaluate the efficiency fluoride(Duraphat®polish) and chlorhexidine varnish(Cervitec®Plus) on biofilm thickness and bacteria viability.

Material-Methods: 10 children aged between 11-14 were included in this study without any teeth loss on maxilla; 5 with high risk of caries (Group-1) and 5 without any carious lesions(Group-2). 3 specimens were embedded in buccal ridge of acrylic plaques prepared for maxilla. By using sectioning device specimens with a size of 2x3mm were obtained from a bovine tooth and then sterilized. Participants were informed to carry plaques for 6, 24 and 48 hours. At the end of every interval the specimens were changed with others obtained from same bovine tooth. After these intervals Cervitec®Plus and Duraphat®polish were applied to 1st and 2nd specimens respectively. 3rd specimens were only rinsed by saline. Samples were evaluated by confocal laser scanning microscope after dying with ethidium bromide and fluorescent diacetate.

Results: Biofilm thickness values of high caries risk group were higher when compared to low caries risk group and this was statistically significant($p<0.05$). Thickness values increased statistically significantly by time($p<0.05$). Microbial agents decreased significantly the viability of microorganisms on biofilm in every interval($p<0.05$), with no change in thickness($p>0.05$).

Conclusions: It is concluded that due to antimicrobial efficiency and their effects on bacteria viability, chlorhexidine varnish and fluoride varnish, these agents can be used in preventive applications.

Keywords: chlorhexidine, fluor, confocal laser, biofilm

Evaluation of the relationship between pubertal growth spurt periods and two dental age assesment methods in Turkish children aged 8-13: research article

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Aim: This study was targeted to investigate the probability of scoring the relationship between dental maturation and skeletal maturation without taking a radiogram outside of panoramic radiogram. The aim of this study was to detect provided that evaluation of dental calcification and comparison with skeletal maturity may be used among Turkish children.

Methods: Panoramic and hand-wrist radiographs of 215 patients (124 girls and 91 boys), with ages ranging from 8 and 13 years, were evaluated. Dental age assesments were detected by Demirjian and Nolla methods. The skeletal maturation was detected by Fishman method and bone age was detected according to the Greulich and Pyle atlas.

Results: All teeth showed positive and statistically significant correlations, the highest correlation was between the mandibular second premolar calcification stages with hand-wrist maturation stages. According to both tooth age determination methods, mandibular second premolar was prominent in determining to the pubertal growth spurt stages.

Conclusions: Dental calcification stages of the second mandibular premolar showed the highest positive correlation with the hand-wrist stages. Therefore, by looking at the dental development of these teeth, children with a certain age range may have knowledge of the pubertal growth spurt period.

Keywords: Dental calcification stages, hand-wrist radiograms, panoramic radiography, pubertal growth stages

Determination of the State Anxiety Levels in 9-12 years-old Children Who Applied to The Department of Pediatric Dentistry in the Faculty of Dentistry

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Aim: The aim of this study is to determine the state anxiety levels of 9-12 years-old children presented at the department of pediatric dentistry in Ataturk University's Faculty of Dentistry.

Material-Methods: The study consists of 55 girls (53.4%) and 48 boys (46.6%) with a median age of 10,49±1,34 (min: 9, max: 12). The Data were obtained through survey forms and State-Trait Anxiety Inventory-STAI (Spielberger) and they were assessed in SPSS 16.0 with percentage distribution, variance analyses and t tests.

Results: When the demographics of the participant patients were examined we found that; 12% was under 12 years old, 53.4% was girl, 85.4% had non-working mothers, 36.9% with high school-graduate fathers, 90.3% had working fathers, 48.5% sometimes delicately brush their teeth, 71.8% used mouthwash, 57.3 % established routine morning and evening brushings, 72.8% never visited the dentist. In the statistical analyses, no difference has been found between the work status of the parents and the anxiety levels of the children ($P>0.05$). No statistically significant difference has been found between the first dental visits and the anxiety levels ($P>0.05$).

Conclusion: Making the children to keep regular dental appointments may positively contribute to diminishing the next generations' dental treatment anxieties.

Keywords: Dental Anxieties, Oral and dental Health, State Anxiety

Comparison of knowledge levels on oral health of the first and five years students in Faculty of dentistry, Ataturk University

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Objective: In this questionnaire study, it was aimed to determine the level of knowledge about oral and dental health of 1st and 5th year students in the faculty of dentistry and compare them according to sex and class.

Materials-Methods: Female and male students randomly selected from Atatürk University Dentistry Faculty 1st and 5th grade were included in the questionnaire. (n = 80) A questionnaire consisting of 25 multiple-choice questions was administered to the students to determine their oral and dental health attitude behavior and knowledge levels. The obtained data were evaluated statistically by Pearson chi-square test.

Results: Of the 160 students in the study, 98 are girls and 62 are boys. It was determined that the frequency of female students brushing teeth and going to dentist was higher than male students. According to the statistical results, 5th grade students according to the first grade students think that they use ideal toothpaste, more importance to interface cleanliness, more frequent and regular dental control, more effective toothbrushing with the right technique and more information about preventive measures ($p < 0,05$). However, fifth grade students were found to use more cigarettes ($p < 0,05$)

Conclusion: Dental health education and training process increases awareness of oral and dental health and knowledge level from first to fifth year.

Keywords: Oral health, dental health, dentistry students

Incidence of Developmental Defects of Enamel in Children with Chronic Skin Conditions: A pilot study

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Aim: The aim of this pilot study was to investigate the incidence of the developmental enamel defects in children attending to dermatology clinics for different skin conditions.

MATERIAL&METHODS: Sixty-five pediatric patients (25 girls and 40 boys; between 7 and 14 ages) who attended to Marmara University Faculty of Medicine Department of Dermatology with the complaint of various skin diseases were examined intra-orally for enamel developmental defects. All patients' medical history was taken by staff member of the department. Dental examinations were done in day light and photographs were taken. DDE index was used to classify enamel defects.

Result: Of the 65 patients 20(30.7) had atopic dermatitis, 2(3) ichthyosis, 8(12.3) psoriasis, 2(3) xeroderma pigmentosum, 3(4.6) ectodermal dysplasia, 7(10.7) nevus, 2(3) morphea, 2(3) papillon lefevre, 4(6.1) vitiligo, 4(6.1) epidermolysis bullosa, 1(1.5) albinism, 1(1.5) urticarial vasculitis, 1(1.5) lichen planus, 1(1.5) lichen striatus, 1(1.5) mastocytosis, 1(1.5) candidiasis, 1(1.5) hemangioma, 4(6.1) unknown skin conditions. Thirty five percent of the patients had developmental defect of enamel which was 5(21.7) atopic dermatitis, 4(17.3) psoriasis, 4(17.3) epidermolysis bullosa, 2(8.6) morphea, 2(8.6) papillon lefevre, 1(4.3) ichthyosis, 1(4.3) ectodermal dysplasia, 1(4.3) lichen planus, 1(4.3) candidiasis, 1(4.3) vitiligo, 1(4.3) hemangioma.

Conclusions: Owing to the high frequency of enamel defects in our study population an evaluation for oral health can be advised for children with skin diseases and it should included in their medical care.

Keywords: developmental defects of enamel, hypomineralization, hypoplasia, skin diseases

Oral hygiene habits of children at the beginning of mixed dentition period and the role of their parents

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Aim: In this study, it was aimed to evaluate the oral hygiene habits of children at the beginning of mixed dentition period and the role of their parents in these habits.

Material-Methods: Two hundred healthy, 6-7 aged of children, who have entered the mixed dentition period yet participated in the study. Children's dft index values were recorded, dental plaque quantity was assessed according to the plaque index criteria of Silness & Loe using TriPlaque ID Gel®. Parents filled out questionnaire forms about oral hygiene habits. Statistical analysis was done using SPSS.

Results: In the study, 105 girls (52.5%) and 95 males (47.5%) were included. Mean dft values of children were 5.35 ± 3.85 , mean plaque indices were 1.90 ± 0.83 . There was no statistically significant difference according to sex and age. 22.5% of the children didn't brush their teeth at all, 1.5% didn't even have a toothbrush. It was learned that 29.5% of the children received parental help during brushing. 55.5% of the parents brought their children to the dentist only when teeth had pain. It is found that the most children who didn't brush their teeth are the children of the mothers with the primary education. As the number of siblings increased, the proportion of children who didn't brush their teeth increased.

Conclusion: It is suggested that the education for society should be given priority for determining the knowledge and practices of children and their parents regarding oral and dental health, correction of false information, correct habits can be transformed into sustainable applications.

Keywords: Oral and dental health, oral hygiene, mixed dentition

Treatment of a Patient With Severe Crowding with Removable Appliance and Extraction: A Case Report

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Introduction: Patients with severe crowding are usually given the indication of extraction as an option of orthodontic treatment. After tooth extraction, it may be possible to improve the tooth alignment spontaneously without applying orthodontic force to the teeth. This improvement sometimes removes the active orthodontic treatment and sometimes it provides treatment benefit by decreasing the duration of treatment.

Case Reports: A 10-year and 10 month old male patient applied to our clinic with the chief complaint of his upper canine teeth were not erupted. Findings of clinical, cephalometric and model analysis of the patient; according to the Hayce-nance analysis the upper and lower jaws space requirements are 15,7 mm and 13,3 mm respectively, lower canine teeth is outside of the arch at the vestibule, upper canine impacted bilaterally, hyperdivergent growth pattern(SN-GOGN; 43,3). As a treatment plan for the patient, 4 premolar teeth extraction with fixed mechanics was determined. As a beginning the first premolar teeth were extracted and fixed treatment was not started and the lower and upper removable appliances were made. At the end of the 7-month follow-up, the upper-canine teeth were spontaneously erupted without any orthodontic force, the lower canine was placed in the arch with driftodonty.

Conclusion: In the patient with severe crowding, the teeth was extracted and waited with the removable appliances and spontaneous improvement of the tooth alignment was provided. In this way the duration of active orthodontic treatment is shortened and the complications that may occur during active treatment are reduced.

Keywords: severe crowding, nonextraction treatment, driftodonty

Use of soft lining materials in the irregular alveolar crests: a case report

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Introduction: Soft lining materials are soft polymers applied to the tissue surface of the prosthesis in order to reduce and evenly distribute the occlusal forces to the mucosal and alveolar tissues under the prosthesis. Different types of soft lining materials, which are used intermittently and permanently according to different indications, are found in clinical applications. Acrylic and silicone-based soft lining materials for permanent use can be applied directly in the clinic as well as in the laboratory.

Case Report: In this case report, the rehabilitation of the total edentulous patient who applied to our clinic with soft lining material supported denture is described.

Conclusions: Soft lining materials provide an opportunity to more protective treatment compared to surgery in initial treatment of presence of irregular alveolar crests.

Keywords: Alveolar Crest, Denture, Soft Lining Material

A comprehensive treatment approach to an immature permanent molar: a case report

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Introduction: Computer-aided design (CAD) and computer-aided manufacturing (CAM) have become an increasingly popular part of pediatric dentistry. CAD/CAM offers a restoration method that decreases the risk of human error and provides highly aesthetic outcomes. This case report presents a comprehensive treatment approach to an immature permanent first molar.

Case Report: A 10-year-old male patient referred to Yeditepe University, Faculty of Dentistry, Department of Pediatric Dentistry with chief complaint of dental caries. Clinical and radiographic examination showed deep dentinal caries with excessive crown damage on the lower left first permanent molar. First endodontic treatment was made with apexification and root canal therapy. Then periodontal treatment was made with gingivectomy by Er:YAG laser therapy. After endodontic and periodontal treatment indirect composite onlay restoration was made by CAD/CAM system.

Conclusion: The combined use of different treatment modalities in the diagnosis and management of the tooth with excessive crown damage is important to prevent any further complications like tooth loss. Despite the high cost of treatment, this type of restoration should be considered if the retained tooth is expected to maintain functionality over the long term.

Keywords: CAD/CAM, gingivectomy, immature molar, pediatric dentistry

Prosthetic rehabilitation of reduced occlusal vertical dimension due to severe wear and loss of posterior teeth: A case report

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Introduction:

Many situations indicating full mouth rehabilitation with severely worn dentition present with the challenge of a loss of restorative space. Extraoral and intraoral examinations are important when determining the occlusal vertical dimension (OVD). The evaluation of the vertical dimension at rest and in occlusion is essential. In the literature, a lot of techniques have been proposed to overcome OVD loss.

Case:

In this case report, functional and aesthetics requirements of a patient who has exhibited with the loss of occlusal vertical dimension was obtained via full mouth rehabilitation.

Conclusion:

A comprehensive treatment planning is needed for OVD. However, these techniques should be discussed to increase OVD because of their lack of reliability and consistency. Therefore, increasing OVD should be determined on the basis of the dental restorative needs and aesthetic demands.

Keywords: full mouth rehabilitation, vertical dimension, worn dentition

Esthetic approaches to anterior region direct composite laminate veneers: case reports

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INTRADUCTION: More conservative approaches are preferred to solve the esthetic problems nowadays. Adhesive applications commonly used in dentistry in the treatment of color defective teeth increase the interest in this practice because it is a much more conservative and cheaper application than prosthetic dentistry. Direct composite veneer were applied to our patients who came to the clinic with aesthetic complaints at anterior region and they were followed up at 6 month recalls in our clinics.

Case Report: First, the patient's restorations were removed and any caries lesion was cleaned. Then acid etching (Etching Gel, Kerr, USA), bonding agent (primer&bond universal, Dentsply Sirono) and composite resin material (G-Aenial, GC EUROPE) were applied in turn to the cavities prepared, according to the manufacturers' s instructions. Second patient suffered from anterior diastema. Teeth have been cleaned and the color selection made, isolation of the teeth was done. Then acid etching, bonding agent were applied the same as first patient's. Composite resin material (Essentia, GC EUROPE) were applied in turn to the cavities prepared, according to the manufacturers' s instructions. Abrasive discs (Sof-Lex, 3M ESPE) was using for contouring and finishing. Postoperative control results obtained at 6th month

CONCLUSION: In clinical evaluation of the patients coming control afeter 6 months, the were no evidence of any fracture and discoloration. The patients were satisfied of these treatment.

Keywords: anterior direct composite, laminate veneers, esthetics approaches

Revascularization treatment in immature permanent molar teeth with necrotic pulp and open apex: case series

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Introduction: Treatment of an immature permanent tooth with necrotic pulp and open apex is a special challenge to the pediatric dentists. Apexification with calcium hydroxide and MTA barrier technique fails to induce continued root maturation which makes the tooth susceptible to root fracture. Hence, an ideal outcome for such a tooth should be revascularization of pulp like tissue into the root canal capable of continuing normal root maturation. The purpose of this case series was to describe successful revascularization treatment of an immature upper and lower molar teeth with necrotic pulp and open apex in between 8 and 10 year-old child patient.

CASE SERIES: Six clinically and radiographically diagnosed necrotic immature permanent molar teeth were treated using revascularization treatment. The therapeutic protocol involved accessing the pulp chamber; irrigating copiously with NaOCl; applying a twomix antibiotic paste as intracanal dressing; then provisionally sealing it. After 3 weeks, the canal was cleaned and the apex irritated with a size 15 K-file to induce blood that would serve as a scaffold for pulp revascularization. MTA was used to seal the chamber before final obturation. Patients were recall at 3, 6 and 12 month. The teeth were asymptomatic with no sensitivity to percussion or palpation. Radiographic examination demonstrated continued thickening of root canal walls, root lengthening and apical closure.

Conclusion: Revascularization treatment with MTA showed clinical and radiographic success in immature permanent tooth. The successful outcome of this case suggest that MTA is reliable and effective for endodontic treatment in the pediatric dentistry.

Keywords: Revascularization, Immature permanent tooth, Stem cell

Aesthetic rehabilitation of dental fluorosis with direct composite veneers: A case report

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Introduction: Dental fluorosis is a anomaly caused by excessive intake of fluoride during the development of teeth. The degree of hypomineralization varies according to the amount of received fluoride that is rated as mild, moderate and severe. This case report presents the esthetic rehabilitation of severe dental fluorosis by direct composite laminate veneer technique.

Case Reports: A 24-year-old male patient was admitted to our clinic due to aesthetic problems concerning his teeth. Clinical and radiographic examination revealed that the patient had severe fluorosis. Periodontal treatment was completed. It was decided to apply direct composite laminate veneers for maxillar anterior teeth no. 11, 12, 13, 21, 22, 23 and mandibular anterior teeth no. 32, 33, 42, 43. Before the laminate preparation, gingival retraction was done. Vestibule enamel surface of teeth were prepared with diamond bur under water cooling for 0,5 mm depth for composite veneers. Aproximal contacts were preserved. Direct composite (Clearfil Majesty es-2, Kuraray Noritake, Japan) laminate veneers were applied using total-etch technique (Single-Bond 2, 3M ESPE, USA). Finishing and polishing procedures were performed with aluminium oxide abrasive discs (Super-Snap Rainbow Technique Kit, Shofu Dental GmbH, Germany). The patient were observed clinically after restorative procedures completed.

Conclusion: Fluorosis can affect teeth and cause problems on aesthetic. Direct composite laminate veneer restorations exhibit clinically acceptable aesthetics, physical and mechanical properties and marginal integrity. Also, they are conservative and lower cost treatment option compared to indirect restorations.

Keywords: Fluorosis, Laminate veneer, Aesthetic

Custom mouthguard applications in prevention of sport injuries: a case report

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Introduction: The essential function of mouthguards is protection against the effects of injuries sustained during sports activities. It has been aimed to decrease the applied force to the maxillofacial region with using mouthguard in sport activities. This purpose will be successfully achieved if appropriate materials ensuring sufficient reduction of the injury force are used for mouthguard fabrication. Therefore, mouthguards are made from different materials in accordance with the sports branch and the wearer. Nowadays polyamide resin materials are used in prosthetic application due to their low elasticity module. One of the important factors is the low elastic modulus of the materials when the incoming forces are distributed without stress in the material.

Case Reports: In this case report, information about clinical and laboratory steps of mouthguard application of polyamide resin material to teakwondo sportsman who applied to our clinic was given.

Conclusions: Polyamide resins are an alternative material that can be safely used in making mouthguards. Use of polyamid resin mouthguards during sports activities is protective against dental trauma.

Keywords: Mouthguard, polyamide resin, sport dentistry

Multidisciplinary treatment approach to a maxillary central incisor tooth which is impacted due to mesiodens

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Introduction: Mesiodens is a supernumerary tooth that is present in the midline of the maxilla between the two central incisors. Mesiodens usually stay impacted. It is important that mesiodens may effect adjacent incisor teeth's position or eruption. In this case report it is presented a multidisciplinary approach for treatment of mesiodens which caused impaction of a permanent central incisor.

Case Report: A 12-year-old, systemically healthy girl, referred with delayed eruption of the permanent central maxillary incisor #11, #21 was present. The mesiodens diagnosed with panoramic radiography. To examine the exact position of mesiodens we applied CT and it has seen that she had 2 mesiodenses in the buccal and the lingual position of #11. First nance appliance has been applied to protect #11's area and maxillary teeth have been bonded braces for leveling. After CT we decided to keep the tooth in the arch as #11, the other two teeth has been extracted surgically. We waited for eruption of #11 but 3 months later there were no movement. So it's buccal surface has been exposed with diode laser and bonded a brace. #11 erupted with orthodontic force in one year. The tooth had an atypical and irregular buccal surface. After debonding of the braces an esthetic restoration has been done with composite.

Conclusion: In this case report we have tried to present that how a multidisciplinary approach helps to a maxillary central incisor which is impacted due to mesiodens

Keywords: Mesiodens, Orthodontics, Diode laser, Multidisciplinary Treatment

Treatment of implant abutment fracture- case report

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Introduction: Implant treatment is frequently used and successful treatment option for single, partial and total tooth deficiencies combined with developing technology. Although high success rates are reported, mechanical and biological complications may occur early or late. The structure of the implant, primer stability, bone quality and health status of the patient are among the factors affecting the success of the implant. The studies that followed the long-term success of the implant indicated that many complications will occur. These complications may include fracture of implant parts, breakage of restorations, loosening or fracture of the abutment screw, loss of bone and loss osseointegration. The purpose of this clinical report is to present prosthetic rehabilitation of the one patient who found a broken abutment.

Case Report: A 40-year-old male patient was applied to department of prosthodontics with the complaint of implant prosthesis. It has been determined that the hexagonal portion (hex) of the abutment is fractured on the intraoral examination performed. After removal of the broken abutment piece, the prosthetic restoration was completed by performing routine procedures.

Conclusions: Removing the broken part is very difficult and time-consuming procedure.

Keywords: Abutment fracture, implant, prosthetic rehabilitation

Esthetic Enhancement Of Patient With Diastema By Metal Ceramic Restoration

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Introduction: Nowadays, with the increase of progress in dental materials, esthetic concerns have become more popular among patients. Although composite restorations and porcelains are frequently used in esthetic areas, metal supported ceramic crowns are also used due to economic reasons. In this case, diastema in the anterior region were treated with metal supported ceramic crowns according to patient's expectations.

Case Reports: A 47 year old male patient was referred to the Department of Prosthodontics, Near East University, Cyprus for esthetic complaint. The patient was unhappy with the appearance of his anterior teeth and his smile. Clinical examination revealed the Angle's class III occlusal classification of the patient. According to the clinical and radiographic examination treatment options were described to patient. Composite restoration is contraindicated for the treatment of diastema. So, this treatment option was eliminated. In addition, patient did not accept the other treatment option which was orthodontic treatment. Metal supported ceramic crowns were planned for the 11,12,13,21,22,23,31,32,33,41,42,43 numbered teeth. Considering the expectations of the patient, treatment was performed according to esthetic and phonetic concerns.

Conclusion: Diastema is an oral problem that is frequently treated due to the esthetic concerns of patients. Treatments with metal supported ceramic crowns is a good and economical alternative with satisfying results both for patients and dentists.

Keywords: diastema, esthetic dentistry, metal ceramic restorations

Intentional replantation of a tooth with poor prognosis because of a deep periodontal defect and broken instrument: A case report

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Introduction: Aim of this presentation is to demonstrate the successful treatment of a tooth with deep periodontal defect and broken endodontic instrument.

Case Report: A +28 year old female patient referred to Atatürk University Faculty of Dentistry Periodontology Department, complaining of bleeding on brushing and mobility of lower first molar tooth. Periapical radiography revealed mesial deep bone defect. Clinical examination showed that the patient had a deep periodontal pocket (10 mm) on probing. First phase treatment was performed in periodontology clinic. There was no sign of healing in mobility and bone defect after repeated treatments. The patient was consulted to department of endodontics whether there was any endodontic problem. As pulp vitality tests showed that the tooth was not vital, root canal treatment was planned. The file was broken during endodontic treatment. The broken file was attempted to retrieve but it could not be succeeded. The patient was informed about poor prognosis and before extraction intentional replantation was offered. After patient's consent, the tooth was extracted. While the socket was thoroughly curetted by the periodontologist, retrograd cavities were prepared and filled with MTA by the endodontist. Infected cement tissue was totally removed. The tooth was soaked with tetracycline solution. Then the tooth placed to its socket and splinted for two weeks. Post operative course was uneventful. After 6 months, radiographic examination revealed new bone regeneration, the mobility was not observed.

Conclusion: Intentional replantation is a viable treatment that can be performed to hopeless teeth as an alternative to extraction.

Keywords: intentional replantation, MTA, broken instrument

Endodontic treatment of a traumatized tooth with double cervical fracture line: A case report

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Introduction: Aim of this case report is to demonstrate treatment of lower left incisor tooth with horizontal cervical root fracture.

Case: A 23 year-old male patient referred to our clinic due to trauma which occurred by unintentional movements at sleep. On clinical examination, the lower left central incisor was tender on palpation and it was mobile. Radiographic examination revealed that there were two fracture lines beneath the CEJ. The patient was informed about poor prognosis because of unfavorable fracture lines and periodontal problem. Because of the close proximity of the fracture lines, performing endodontic treatment and fixing the fractured segments with post was thought to be an alternative to extraction. Under local anesthesia, the tooth splinted to adjacent teeth and coronal access cavity was prepared. Working length was determined by apex locator and verified by radiograph. The root canal prepared using ProTaper next instrument up to F3 size. After chemomechanical preparation, apical part of canal filled with AH plus and gutta percha. Coronal part of canal prepared for post placement. Fiber post placed into the canal using dual cured resin cement. The patient referred to periodontology department for periodontal treatment. Two weeks later, splint was removed. 6 months later the tooth was asymptomatic and mobility was in the range of physiologic limits.

Conclusion: Despite of follow up is short time period, new bone regeneration which is a sign of healing is evident in this case. In cervical fractures, even in severe cases, conservative approach is a better treatment alternative.

Keywords: cervical root fracture, fiber post, trauma

Oral squamous cell papilloma: a case report

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Introduction: Squamous cell papilloma is known as the benign proliferation of multilamellar epithelium associated with the human papilloma virus. The purpose of this case report is to demonstrate the results of the surgical approach for the treatment of oral squamous cell papilloma.

Case Report: A ten-year-old otherwise healthy patient was admitted to department of pediatric dentistry with the complaint of localized gingival hyperplasia. A pedicular, papillary, edematous and red coloured lesion was detected in the vestibule surface of the left upper central tooth with the history of about 18 months. Periapical radiographs indicated intact alveolar bone. One month after phase 1 periodontal treatment, the lesion was excised under local anesthesia. Histopathologic examination revealed squamous cell papilloma diagnosis. The patient was maintained for 4 months and no recurrence was observed.

Conclusion: Surgical excision following initial periodontal treatment presents successful result for the treatment of oral squamous cell papilloma. The patient's compliance to the maintaining protocol reduces the probability of the lesion recurrence.

Keywords: Oral squamous cell papilloma, pediatric dentistry, gingival hyperplasia

Restorative Approaches in Orthodontics: 2 Case Reports

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Introduction: Patient role cannot be neglected in aesthetic solutions. Planning the most appropriate treatment option requires for an interdisciplinary study, as well. We aimed to share the results of our patients leading our study and the aesthetic results, as well.

Case Reports: As our first case 14-year-old female patient referred to our clinic with the complaint of crowded teeth. In the examination, it was detected that the patient presenting with anterior crowded teeth also had smaller sized mesiodistal in upper lateral teeth. In the measurement both laterals were detected to have 5.5 mm mesiodistal sizes. Due to few crowded teeth, it was decided to correct the malocclusion with fixed method without extraction of teeth. With 18-month lasting treatment, 1 mm cavity was formed up in the mesial section of lateral teeth. These cavities were filled with composite laminated veneer. During this procedure, prior to preparation A2 colored (Herculite XRV, Kerr, Italy) composite (Alpha Etch Jel, Rio de Janerio, RJ, Brazil) 37% orthophosphoric acid and (Optibond, Kerr, Scafati, Italy) bonding were applied.

As our second case, 23-year-old female patient refused orthodontic treatment option to correct extensive crowded teeth and aesthetic expectation of hers was met with laminated veneer by using single session of A2 colored (Tokuyama Estelite, Japan) composite (Alpha Etch Jel, Brazil) and 37% orthophosphoric acid and (Tokuyam Bond Force II, Japon) bonding.

Conclusion: Restorative dental treatment met the expectations of both patients accepting and refusing orthodontic treatment.

Patient expectation is one of the leading parameters requiring for multidisciplinary methods.

Keywords: Dental veneers, Esthetic, Restorative Dental Treatment

Treatment of maxillar lateral diastemas with direct resin composite restorations after orthodontic treatment:two case reports

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Introduction:

Diastema is an aesthetic problem due to spaces or differences between teeth sizes. Desired aesthetic results may not be obtained as a result of some orthodontic treatments, as a result of which diastemas may remain between the teeth. Direct resin composite restorations are conservative and are a low cost treatment option for the closure of diastemas between the teeth.

Case Reports:

Case 1:

A 14 year old male patient who had an orthodontic treatment applied to our clinic to rectify the diastemas in the upper lateral incisor teeth.

Case 2:

A 23 year old woman patient who had an orthodontic treatment applied to our clinic for closing diastemas in the tooth 12 and for build up 22. She was also complaining about the fracture of her 21. The bevel was made at the enamel surfaces of tooth 21.

The teeth were etched with a %37 orthophosphoric acid (Etch Royal; Pulpdent, USA) and a self-etch bonding agent (Clearfil Universal Bond; Kuraray, Japon) was applied without any preparation on the enamel surfaces. In the first case teeth were restored with the composite resin (Herculite Classic A2; Kerr, Italy) and in the second case teeth were restored with the composite resin (Herculite Classic A1; Kerr, Italy) with layering technique. Finally, the restorations' surfaces were polished with finishing discs (OptiDisc; Kerr, Switzerland).

Conclusions:

Direct composite restorations are a conservative treatment method for the treatment of irregularities caused by tooth shape and size anomalies during or after the cases where the orthodontic treatment does not provide anterior region esthetics.

Keywords: diastema closure, direct composite, esthetic

Early diagnosis and extraction of impacted mesiodens in a young children: A case report

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Introduction: Mesiodens teeth are often diagnosed by the complications they cause, such as the ectopic eruption of the permanent central incisors. Since there are not enough clinical studies regarding removal of early diagnosed mesiodens teeth, the debates on the timing of removal of these teeth have still been continuing. While some researchers advocate early diagnosis and extraction as the best treatment option to prevent complications of the permanent incisors such as ectopic eruption, diastema or crowding, other researchers advocate the removal of mesiodens and subsequent orthodontic treatment after the permanent teeth completed root formation.

Case reports: 6 years old boy admitted to Ataturk University, Faculty of Dentistry, Pediatric Dentistry Department. His mesiodens was diagnosed incidentally by an orthopantomography that was taken as routine examination. In this case report, the evaluation of the root development of central incisors 6 years after removal of the mesiodens under general anesthesia was reported.

Conclusion: In the evaluation root development and periodontal status were found to be completely normal.

Keywords: Early diagnosis, Extraction time, Mesiodens

Interceptive Treatment Approach In Anterior Open-Bite Patient Due To Tongue Thrust: Case Report

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Introduction: Interceptive approaches prior to active orthodontic treatment either reduce the need for active treatment or reduce the severity of anomaly, shortening the duration of active treatment. These approaches, which are usually performed in the juvenile period, can sometimes be performed in the adolescence period when the permanent dentition is complete.

Case: A 14 years and 4 months old male patient with the complaint of the spaces between the upper front teeth and the overjet referred to our clinic. As a results of clinical, cephalometric and model studies; simple tongue thrust, maxillary polydiastema, reduced overbite (-1mm), increased overjet (+7mm), increased lower-upper incisor axis inclinations (95,7o-113,9o), hyperdivergent growth pattern (SN-GoGn 44,1o). The patient was planned to have a removable tongue cribs which is a habit-breaking appliance, and nonextraction fixed orthodontic treatment afterwards. As the first phase, the patient was applied a removable tongue habit appliance and followed up for 1 year and 3 months. At the end of the treatment, the tongue thrust of the patient was ended. In our findings, we found normal adult swallowing, well-aligned teeth in the upper and lower arch, increased overbite (+1mm), decreased overjet (+4mm), decreased lower and upper incisor axis inclinations (94o-108o), reduced vertical dimension (SN-GoGn 42.4o).

Conclusion: Simple interventions before active treatment provide material and spiritual advantages. After the use of appliances, active treatment was not required for the patient who had planned fixed treatment and both skeletal and dental improvements have been achieved with a simple habit breaking device.

Keywords: tongue thrust, anterior open bite, habit breaker

Conservative management of an ectopically erupting permanent maxillar molar: a case report

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Introduction: Ectopic eruption, a problem defining the eruption of a permanent tooth into an atypical position, usually diagnosed from routine examination because it is asymptomatic. Lack of timely intervention may cause loss of the primary second molars and space loss as the permanent molar erupts mesially. The aim of this case report is describe the conservative management of ectopically erupting first molar by the use of elastic separators

Case Report: A seven-years old boy referred to the Department of Pediatric Dentistry, Istanbul University for initial examination. Intraoral examination revealed ectopic eruption of maxillary first permanent molars and bilateral posterior cross-bite. Radiographic examination showed moderate root resorption of the second primary molars. Treatment plan involved the use of elastomeric separators to move the ectopically erupting teeth away from the primary molars and slow expansion of the maxilla with removable appliance. 1 year follow-up showed that both upper permanent first molars are erupted and in occlusion, primary molars are asymptomatic.

Conclusion: Early diagnosis and treatment are essential to prevent premature loss of primary tooth due to root resorption and mesial drift of permanent molars in order to avoid future occlusal problems. When the impacted molar is clinically accessible, several types of separation can be used for the treatment. With reciprocal anchorage, either a brass ligature, a spring-type deimpactor or an elastic separator can be used.

Keywords: ectopic eruption, elastic separator, expansion

Cleidocranial Dysplasia: A Case Report with Clinical and Radiographic Findings

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Introduction: Cleidocranial dysplasia (CCD) is a rare congenital disorder. General features of this disorder involve clavicular defect, late fontanelles closure, enlarged skull, retained primary teeth, impacted permanent and supernumerary teeth.

Case Reports: A 7½ year-old female patient applied to the Department of Pedodontics at Inonu University with multiple decayed teeth. There was no family history of vertical or horizontal inheritance but of consanguineous marriage. She has no medical problem except this syndrome. In the orthopantomograph and computed tomography, the number and the location of the supernumerary teeth was determined. The parents and patient were informed and the patient's fillings were performed. Since there were so many supernumerary teeth in the jaw, the patient has still been followed up for serial extraction according to the eruption time of the supernumerary teeth.

Conclusions: For CCD patients, it is very important to decide the detection of supernumerary teeth and timing of teeth extraction in terms of jaw development. Dentists should pay more attention to that.

Keywords: Cleidocranial dysplasia, Supernumerary tooth, Clavicular defect

Gingival recontouring and closing diastemas with direct composite buildups: A case report

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Introduction: Tooth size, shape, structure and like the others in the anterior region of mouth are major esthetic problems for patients. In this case report, the treatment of a patient with a diastema of the maxillary anterior teeth was described. Diastema is a mesiodistal gap between teeth which is a non-aesthetic situation.

Case Reports: A 26-year-old male patient was admitted to our clinic with a request of diastema and basic crowding of the upper front teeth due to aesthetic discomfort. Intraoral and radiographic examination revealed diastema of the maxillary anterior incisors as well as a gingival irregularity. The periodontal health status of the patient was within the accepted limitations, and the teeth were without caries. Available treatment options were explained to the patient and it was decided to treat the gingival recontouring and the diastema with direct composite buildups. An irreversible hydrocolloid impression of maxillary arch was taken and wax-up was performed. A silicone index was obtained from the cast to guide the application of the first lingual composite layer. A second increment of the same composite resin was then placed on the portion of the lingual bevel not covered by the first increment and on the incisal aspect of the fracture with sufficient opacity to hide the fracture line.

Conclusions: Direct composite laminate veneers form a conservative, low-cost treatment option for bridging the unaesthetic gaps between the teeth. direct composite veneers and gingival recontouring combining resulted in more successful outcome and patient's satisfaction.

Keywords: Composite, Crowding, Diastema, Recontouring

Correlation of two dissimilar dental age determination methods with chronological age and bone age in children aged between 8-14 years in a south turkish population

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Aim: In this study, different age determination methods were evaluated.

The goal of this study is to evaluate the relation of the Demirjian's and Nolla's dental age determination methods with chronological age and bone age in children aged between 8-14.

Material&Methods: In this study, 317 children (B/G:152/165) were included. The population's chronological age and bone age in accordance with Greulich-Pyle Atlas by scoring left wrist radiograms, dental age according to Demirjian's and Nolla's Methods by using panoramic radiograms were detected and relations between each other were examined.

Results: As the whole study group was evaluated, the bone age and the dental ages calculated according to Demirjian's and Nolla's methods was found higher than the chronological age by 0.31 year, 0.68 year and 0.25 year, respectively. For this reason, the closest result to chronological age came from Nolla's method.

Conclusions: It is more accurate to use the Nolla method for this age group in determining tooth age. At the same time, it is possible to have a high degree of accuracy about the tooth age found by the Nolla method and bone age.

Keywords: Chronological age, Bone age, Dental age, Demirjian's method, Nolla's method

A case Report of Periodontal Regeneration with Papilla Preservation Flap Technique: 20 Months Follow-Up

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Introduction: The ultimate goal of periodontal therapy is regeneration of tissues destroyed by periodontal disease. For this purpose, bone graft material and membrane combination were used to treat intrabony osseous defect.

Case Report: A 60 years old male patient came to the clinic of periodontology for routine periodontal treatment. The patient was exsmoker and had no systemic disease. After clinical and radiological examination, tooth 11 showed mobility grade 1, 7 mm probing depth at mesiobuccal side and 6 mm at mesiopalatal side with bleeding on probing. The tooth had endodontic treatment which performed twenty years ago. After phase 1 therapy, flap surgery was planned. After local anesthesia, mucoperiosteal flap was raised using papilla preservation technique. After flap elevation, it was seen a perforation buccal aspect of the root. MTA was placed into perforation site. One wall intrabony defect was filled with deproteinized bovine bone graft and covered with collagen membrane. Flap secured with simple interrupted 4.0 prolene suture. A periapical radiograph was taken after surgery. Antibiotic (amoxicilin 500mg, 3x1) and chlorhexidine (CHX) mouth rinse (%0,2, twice a day) were prescribed. One week after surgery, membrane exposure was seen and applied %1 CHX gel. It was asked the patient to use CHX mouth rinse one more week. Three weeks after surgery, epithelization was completed in palatal side. Probing depth, gingival recession were recorded after six weeks. The tooth still had mobility grade-1. The patient reported no pain or discomfort. Another periapical radiograph was taken after eight months. Bone filling was observed apical part of defect. The patient was again recalled after 20 months. Clinical parameters were recorded.

Conclusion: Deproteinized bone graft and collagen membran combination with papilla preservation flap technique is effective for the management of intrabony osseous defects.

Keywords: guided tissue regeneration, intrabony osseous defect, papilla preservation flap technique

Prosthetic Rehabilitation of Edentulous Space with Fiber Reinforced Composite Resin

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Introduction: Loss of the anterior teeth can be detrimental to the patient both psychologically and socially. A rapid replacement is important to prevent tipping of adjacent teeth and to maintain the aesthetics and phonetics. Many treatment options are available for this replacement, such as insertion of a dental implant or a conventional fixed partial denture and removable prosthesis. The aim of these clinical reports were to describe the technique for the patient who lost their anterior teeth, using fiber reinforced composite resin.

Case Reports: Each of these approaches has its own specific advantages and disadvantages in terms of usage, aesthetics, and compatibility. In such patients, fiber reinforced composite (FRC) resin based restorations may be a good treatment option. Conservation, natural preservation, minimal invasion, aesthetic maintenance, ease of application, single chair side, cost effectiveness and metal-free content are some of the advantage of these method. Their useage is clearly indicated for both short- and long-term restorations. It has been reported that a fiber reinforced replacement of edentulous space provides adequate strength and esthetic requirements in such cases.

Conclusion: Using fiber reinforced composite material seems to be a good option; as this technique is rapid, conservative and aesthetic for the patient.

Keywords: edentulous anterior teeth, fiber reinforced composite, rapid treatment

The rehabilitation of congenitally missing teeth with young patients

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Introduction: Congenitally missing teeth (CMT), is the absence of one or few teeth which is rare in primary dentition. That agenesis could be result from the problems that arise the onset of tooth development or from the dental lamina stage and familial inheritance. Pediatric dentists could play a huge role to maintain a child with CMT. Two CMT cases and rehabilitation was shown in this report.

Case Report: The first case in 2014, a 3-year-old child patient was applied to Erciyes University, Faculty of Dentistry, Department of Pedodontics with complaint of the delay of normal dentition. The clinical and radiographic examination showed all primary second molar teeth were absent. There was no family history in this case. All caries treated and extraction was done under sedation, space maintainer was planned by the beginning of permanent dentition. Patient was followed for permanent first molar teeth eruption and at the age 6 panoramic radiography was taken, which showed all molar germs were absent. Prosthetic replacement was done by the age of six. The second case in 2017, a 10-year-old child patient, the mandibular left second permanent molar, mandibular right first and second molar tooth germ was absent after clinical and radiographic examination. There was no systemic problems and family history. After orthodontic consultation, child prosthesis was done after the dental treatments were completed.

Conclusion: Regular visits for 3 months is scheduled to monitor oral hygiene and adjustment of the prosthesis. At the 6 months follow up period nutrition of the patient and oral hygiene was improved.

Keywords: prosthesis, congenital, missing, hypodontia

Anterior fiber-reinforced resin composite pontic in a single visit: A case report

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Introduction: The loss of anterior teeth can psychologically and socially harm the children. Following the loss of the anterior tooth, an urgent restoration is needed to avoid esthetic, chewing, phonetic difficulties and to preserve the toothless area.

Case Report: A 12-year old boy was admitted to the Department of Pediatric Dentistry in Cumhuriyet University, Sivas with the complaint of absence of the right maxillary incisor tooth, and non-aesthetic composite restorations in left maxillary incisor teeth and hypoplastic deformity in the right maxillary lateral tooth. The patient refused the orthodontic treatment. Informed consent was obtained by both of parent and patient. Fiber-reinforced composite restoration was preferred by taking consideration the age of the children, the period of growth and development as increase in the intercanine distance stops during the 12 years old. Unaesthetic restorations were renewed. Resin composite strip crown was applied to the right maxillary lateral tooth.

Conclusion: The use of fiber-reinforced resin composite pontics offers the optimal size, shape and color advantages. Also, this treatment gives advantages to patients who can not tolerate prolonged treatment sessions, as well as ease of use, and natural feeling compared to removable partial dentures. Such bridges may be preferred since they can be performed in a shorter time without laboratory application, and they are less costly in patients who have difficulty in economically for long-term temporary fixed prosthetic treatments or mini-implant applications.

Keywords: composite pontic, fiber-reinforced resin, tooth loss

Unilateral Fusion of Mandibular Permanent Lateral Incisor with Canine, 3 Years Follow-Up: A Case Report

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Introduction: Tooth fusion is characterized by the union of two dental germs during the developmental stage; it results from an aberration of both the ectoderm and the mesoderm. The crowns are fused by the enamel and/or by the dentin, and may show two roots or two root canals in a single root. Tooth fusion in the permanent dentition is less frequent than in the primary dentition. Unilateral incidence is about 0.5% in primary dentition and 0.1% in permanent dentition.

Case Report: A 10-year old boy was admitted to clinic for routine dental examination. During the clinical examination, the fusion of mandibular canine and incisor tooth was found incidentally. Fusion was only noticeable when looked at carefully. The crowns were morphologically close to normal. Radiographic examination demonstrated two separate roots and pulpal canals. Patient and his parents were unaware from this situation. Follow-up to the patient was recommended.

Conclusion: Double teeth could cause aesthetic and functional problems. Such as, carious lesions on the grooves, particularly in the fusion zone; periodontal problems associated with the grooves that extend subgingivally; asymmetries, as fusion and gemination occur in the anterior segment; malocclusions, especially when supernumeraries are involved. Fusion is generally asymptomatic, but the variations in tooth morphology often require a treatment specifically designed for each case, potentially including root canal treatment, surgical removal of one of the roots, or even tooth extraction and prosthetic treatment or non-invasive aesthetic composite restorations. According to the 3 years follow up, in this case, there were no need for orthodontic or restorative therapies.

Keywords: tooth fusion, double teeth, mandibular lateral incisor, mandibular canine

The prosthetic rehabilitation of a partial edentulous maxilla treated with dental implants using the "Toronto Bridge" technique

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Introduction

Different characteristics of screw- and cement-retained implant restorations may influence the esthetics, retrievability, retention, passivity, occlusion, accessibility, cost, and provisional restorations. Dental implants have provided exceptional rehabilitative options for edentulous and partially edentulous patients. The Toronto Bridge is a treatment modality proposed for restoring several missing teeth in patients with increased vertical bone resorption.

Case report

This case report describes the prosthetic rehabilitation of a partial edentulous maxilla treated with dental implants using the "Toronto Bridge" technique for restoring both function and aesthetics.

Conclusion

This type of prosthesis is a screwed-in mesostructure with milled abutments for the cementation of single or multiple suprastructures. This device could also be named "abutment-hybrid overdenture".

Keywords: cement, dental prosthesis, implant-supported, prosthesis design, screw

Endocrown As A Therapeutic Approach to Endodontically Treated Teeth – Case Report

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Different treatment options are available for endodontically treated teeth. Most of them in routine practice are preferably post core treatment. However endocrown restoration is an alternative option for greater destruction in conservative dentistry.

A 55-year-old woman whose right maxillary first molar treated by endodontically has consulted to our clinic demanding an prosthodontic treatment. After a complete radiological and clinical examination. Reported that hepatitis C in patients who received medical history. Patient reported with a fractured restoration in upper right back region of upper jaw. Various treatment modalities were discussed and conservative approach of restoring the tooth with an endocrown was decided as the treatment option, as more than half the residual tooth structure was remaining.

The present case report describes an aesthetic and conservative posterior endocrown restoration of a nonvital tooth using lithium disilicate glass-ceramic.(IPS E-max, Ivoclar Vivadent)

The impression were taken with polyvinylsiloxane impression material.

After the checks were done, endocrown was bonded with using resin cements. In regard to the restoration design, the modified endocrown design with intraradicular extensions protected the remaining tooth structures better than post-core design.

As a result the quantity and quality of the coronal structure are crucial in this clinical scenario. By contrast, the adhesion of prefabricated posts has limited long-term stability making this procedure effective only in selected cases. Thus, other therapeutic alternatives should be considered. When the pulp chamber retention cavity is favorable, as in the present case, endocrown restoration may be indicated to restore the biomechanics of the tooth.

Aesthetic approaches in anterior teeth: case report

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Aim: Diastema is caused by differences between sizes of two adjacent tooth or gaps in the dental arch; and thereby this gives rise to considerable aesthetic disorders and dentofacial incompatibility. Especially, spaces seen among many teeth in the anterior region is named as polidiastema. One of the most important reasons are genetic factors.

The aim of this case report was to present diastema closure with incremental direct composite resin technique.

Case Report: After examination patient, having esthetic concern of interdental gaps in anterior region, the following indications were identified;

Macrodonia on the #21 tooth of the patient, hipertrophic upper lip frenulum and polydiastema in upper anterior region were observed. The mesial surface of tooth number 21 was prepared with a diamond bur in order to reduce the width of the tooth achieving a symmetrical midline 3 times every 2 weeks. Frenectomy procedure was performed by using diode laser (Epic 10 Diode Laser, Biolase, USA) and waited for healing for 10 days. Direct composite resin restorations were planned for upper anterior incisors in order to achieve an esthetic appearance. After necessary isolation processes and total-etch adhesive system application, direct composite resin restorations were carried out using a supra-nanofilled composite resin (Estelite Sigma Quick, CA, USA) in A1 in appropriate increments.

Conclusion: This method provides a satisfying esthetic and durability while protecting dental tissues as an alternative to prosthodontic approaches.

Keywords: Diode laser, Frenectomy, Macrodonia, Polidiastema

Aesthetic Approaches to Traumatized Teeth: Two Cases Reports

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Aim: Crown fractures are frequent dental injuries, especially in young patients. It is beneficial quickly to restore the function and the aesthetics of traumatized tooth. Esthetic and easy rehabilitation of these anterior teeth is possible using layering techniques and direct composite resin restorations.

In these cases reports, direct composite laminate veneer technique used for two patients with esthetic problems related to fractures.

Material-Method: After examination of two patients, having esthetic concerns the following indications were identified:

Case A: A 16-year-old female patient was referred to the clinic with fracture of the two maxillary central incisors. After clinical examination, the fracture incisal triple of the crown without pulp exposure was revealed in both teeth.

Case B: A 39-year-old male patient attended for the treatment of the fractured #11 tooth that involved enamel and dentin without pulp exposure.

After necessary isolation processes, total-etch adhesive system application, direct composite resin restoration was carried out using a universal dentin microhybrid composite (Filtek Z250, 3M ESPE, MN, USA) resin for case B. Then, a supra-nanofilled composite resin (A1, A2, shades Estelite Sigma Quick, CA, USA) were incrementally applied with for cases A, B respectively.

Conclusion: This method provides a satisfying esthetic and durability while protecting dental tissues as an alternative to prosthodontic approaches.

Keywords: Crown fracture, Direct Composite Restorations, Incisal Fracture, Trauma

Bisphosphonate-Related Osteonecrosis of the Jaw:Case Reports

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Introduction: Bisphosphonates are powerful drugs used to treat osteoporosis and malignant bone metastasis. Side effects are seen rarely, while osteonecrosis of the jaws is one of them. Osteonecrosis occurs in maxilla and mandible corruption of blood supply. Especially in maxillary and mandibles, is the result of exposure to trauma and the damage of the thin periosteum on the resultant and the settlement of microorganisms easily in this region. Clinical symptoms such as oropharyngeal pain, mobility in teeth, fistulization, trismus, infection can be observed in these patients.

Case Report 1: A 62-year-old male patient presented with complaints of pain in the lower jaw to İstanbul University Dentistry Faculty. Osteonecrosis was diagnosed preliminary in the intraoral examination. In his anamnesis using bisphosphonate after stomach cancer was learned.

Case Report 2: A 63-year-old female patient who applied to İstanbul University Dentistry Faculty with the having of pain and swelling in the right lower jaw. Intraoral examination revealed fistulization in this region. Using bisphosphonate after osteoporosis treatment was learned in her anamnesis.

Conclusion: In these case reports, surgical treatment of osteonecrosis due to use of bisphosphonate is described.

Keywords: bisphosphonate, osteonecrosis, surgical treatment

Dental Implants in Children with Oligodontia or Anodontia: Three Case Reports

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Introduction: Using dental implants in children is still controversial. The replacement of teeth by implants is usually restricted to patients with completed craniofacial growth, however reports in the literature suggest that dental implants can be used successfully in partially and completely edentulous arches of children affected by congenital diseases, oral cancers, ectodermal dysplasias and Rhabdomyosarcomas. It is recommended that while deciding the optimal individual time point of implant insertion, the status of skeletal growth, the degree of hypodontia, and extension of related psychological stress should be taken into account, in addition to the status of existing dentition and dental compliance of a pediatric patient. Follow-up by a multidisciplinary team involving pediatric dentistry, orthodontics, prosthodontics, and oral-maxillofacial surgery specialists is advocated to be the most appropriate approach in such cases. The use of implants in the prosthetic rehabilitation of these children may provide considerable improvement over traditional prosthetic methods.

Case Reports: In this case report, 3 cases that treated multidisciplinary with dental implants are presented.

Results: In both cases the implants were functionally loaded and resulted in a high patient satisfaction. We recommend the early insertion of dental implants in children with severe hypodontia, oligodontia or anodontia related to congenital diseases, oral cancers, ectodermal dysplasias or similar conditions to improve the quality of life.

Keywords: dental implant, children, esthetical rehabilitation

Bleaching treatment of an open-apex tooth: a case report

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Introduction: Bleaching of discoloured teeth, either vital or devital, because of increased interest in esthetic dentistry, has become very famous. Devital bleaching has numerous advantages (less time consuming, more economical and conservative) over other treatment options such as full veneer crowns. This case report aims to report orthograde endodontic treatment with MTA and bleaching procedure of an open-apex tooth.

CASE REPORTS: A 28-year-old female patient who complained of discoloured and unaesthetic appearance of her upper lateral incisor referred to our clinic. According to periapical radiograph; the tooth 12 was a open apex tooth and wide periapical radiolucency was observed around it. The tooth 13 was also devital. Endodontic treatment was performed the teeth during two appointment. The tooth 13 was obturated with gutta-percha and resin-based sealer using single cone technique. The tooth 12 was obturated with MTA using apical plug technique. Bleaching procedure was delayed for two weeks. Because MTA could increase discolouration. Therefore, teeth were restored with temporary filling material.

After a pre-bleaching photograph was taken for the patient, preventive applications were carried out. 35% hydrogen peroxide gel (Opalescence Endo) was then applied. We changed the gel and repeated the bleaching until desired results were obtained. Post-bleaching appearance of the teeth were pleasurable.

CONCLUSION: According to 3 and 6 months follow-ups, teeth were symptom-free. The presence of resorption and radiolucency was also assessed radiographically and there was no evidence of cervical or progressive apical resorption. Also the colours of teeth were still satisfactory for the patient.

Keywords: bleaching, endodontic, esthetic dentistry, MTA

Saliva Ischemia Modified Albumin (IMA) Level in Patients with Severe Caries

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Aim: Dental caries is a multifactorial infectious disease, are seen in almost every human being from childhood to old ages and one of the biggest reason people go to the dentist most often. Because of tissue damage and infection, reactive oxygen species are released from tissue and cause chemical changes in albumin molecule. Albumin transforms into IMA. Our aim was to identify IMA levels in saliva that might lead to diagnosis in groups with high caries risk.

Material &Methods: Saliva samples were collected from 48 healthy controls and 149 patients with severe caries, admitted to SU Dentistry Faculty clinics. Saliva samples were collected according to stimulated saliva collection procedure. IMA levels were measured using albumin cobalt binding test by Perkin Elmer Lambda spectrophotometer.

Results: Salivary IMA levels were statistically higher in patients with caries mean (1.009 ± 0.45 ABSU) compared to control group mean (0.86 ± 0.3 ABSU) ($p=0.01$). There was no correlation between caries numbers and salivary IMA levels ($p=0.2$). Additionally, there was no statistical significance between periodontitis, plaque, gum bleeding, smoking, systemic disease and salivary IMA levels.

Conclusion: We evaluated the use of IMA levels in saliva for diagnosis of caries as it is simple, non-invasive and can be easily collected. It was found that patients with dental caries have statistically higher salivary IMA levels independent of other dental or systemic diseases.

We claim that the active infection caused an increase in the level of salivary IMA. Salivary IMA levels may be considered as novel biochemical marker in patients with severe dental caries.

Keywords: Dental caries, ischemia modified albumin (IMA), saliva

Aesthetic Rehabilitation of Multidiastema by Direct Composite Resin: 2 Case Report

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Introduction: As a result of increasing aesthetic expectations, diastema closing on the anterior teeth has become a frequent treatment. In the treatment of diastema, direct composite restorations, ceramic and composite laminates are applied. In this case report, 2 diastema closure cases rehabilitated by applying direct composite are presented.

Case Reports: It was planned to close the polidiastemas of the anterior teeth of 2 patients, who referred to our clinic with aesthetic complaints, with direct composite restorations. Periodontal treatment were applied to prevent inflammation and bleeding in the gums in the diastema area, one week before the treatment started. After isolation from two diastema cases, the teeth which are contact with diastema area were roughened with fine grained (yellow) diamond burs (Diamond burs F0-32EF).35% orthophosphoric acid was applied to roughen the tooth surfaces (Scotchbond™ acid, 3M-ESPE, USA). After rinse and dry, the bond (Singlebond™ Universal, 3M ESPE, USA) was applied and polymerized by LED light. A2 dentin and A2 enamel nanocomposite were used in the restoration of teeth by layering technique (Filtek™ Ultimate Universal,3M-ESPE, USA). Finishing and polishing were made at the last stage (Sof-Lex,3M-ESPE, Identoflex white, Keer, USA).

Conclusions: At one week and 6 months recalls, the patient had no discoloration, fracture or periodontal problems. Direct composite restorations on diastema cases, providing minimally invasive approach and economical results with a single session, satisfy both patient and dentist. Excellent aesthetic results can be obtained in the treatment of polidiastema with direct composite restorations with a correct treatment plan.

Keywords: Dental Aesthetic, Direct Composite Resin, Multidiastema

Treatment of a patient with persistent upper deciduous lateral incisors: a case report

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Introduction: The aim of this report is to present the orthodontic treatment of an adolescent patient with bilaterally persistent upper lateral incisors.

Case Reports: A sixteen years old female patient with chief complaint persistent deciduous teeth and poor dental appearance were evaluated in terms of orthodontics. Radiographic and intraoral evaluation revealed that skeletal class II and dental class I relationships, persistent upper deciduous teeth, diastema between central incisors, protruding central incisors, excessive overjet and critical overbite. In treatment plan, it was decided to remove upper deciduous lateral incisors. After removed persistent lateral incisors, the protruding permanent central teeth were retracted and malocclusion was corrected with preadjusted appliance system that called MBT versatile plus. Fixed orthodontic treatment was completed.

The patient was treated successfully. At the ends of treatment, dental class I molar and canine relationship was achieved. Central incisors teeth were retracted to their proper position. All complaints of the patient have been solved. Satisfying esthetic and functional results were obtained.

Conclusions: Patients with bilaterally persistent lateral incisors can be treated with fixed orthodontic mechanics. Orthodontic treatment increases the self-confidence of patients.

Keywords: Persistent, Deciduous tooth, Lateral incisor

Treatment of a patient with fractured upper right central incisor due to trauma: case report

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Introduction: In this case report, it is presented that the correction of orthodontic problems of a female patient with fractured upper right central incisor due to trauma.

Case Reports: A seventeen years old female patient with chief complaint unaesthetic dental appearance and crowding was seen at department of orthodontics. Orthodontic evaluation revealed that skeletal class I and dental class I relationships, mild crowding, crossbite of upper right lateral incisor, critical overbite and poorly root canal treatment operated on fractured upper right central incisor. In treatment plan, it was decided to apply fixed orthodontic treatment while endodontically controlling the upper right central incisor tooth without permanent tooth extraction. Before applied fixed orthodontic appliance, endodontic retreatment therapy was done. After the upper right incisor was endodontically controlled, the fixed orthodontic appliance was placed.

During fixed orthodontic treatment all teeth were aligned by mildly protrusion. At the end of treatment, dental class I molar and canine relationship was achieved. Upper and lower anterior teeth were placed to their proper position and all teeth were aligned. All orthodontic complaints of the patient have been solved. Upper right central incisor was endodontically controlled. No problems were found in the right upper central incisor. Satisfying esthetic and functional results were obtained.

Conclusions: Patients with fractured incisor due to trauma can be treated with fixed orthodontic mechanics. Orthodontic treatment plays a key role in the solution of medical, dental and psychosocial traumatic problems.

Keywords: Fracture, Central incisor, Trauma

Dentistry Approach In X Linked Agamaglobulinemia Which Is a Rare Syndrome: A Case Report

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Introduction: X linked agamaglobulinemia (XLA/ Bruton's Disease) is a congenital immune deficiency disorder caused by abnormal B cell production. It is a rare disease which was described by Colonel Ogden Bruton in 1952 first time. XLA is caused by mutation in the Bruton tyrosine kinase (BTK) gene, located on the long arm of X chromosome. The clinical problems of XLA include bacterial infections such as otitis media, sinusitis, bronchitis and sepsis. Replacement immunoglobulin therapy is the cornerstone of the treatment.

Case Reports: This case report presents dental procedures applied to an 8-year-old patient with XLA disease. Based on immunology consultation, it has been decided to treat the patient under antibiotic prophylaxis. In addition, all dental procedures were performed in the operating room by keeping general anesthesia conditions ready to apply in case anaphylactic shock development. After clinical and radiographic evaluations, we detected deep dentine caries in teeth 74,84, 8515, 25, 36; and colored fissures in teeth 16, 26, 46. It was decided to apply composite restorations/fissure sealants for the permanent teeth and amputations/composite restorations for the primary teeth. Extraction and space retainer were applied to the tooth numbered 85. All of the dental procedures were successfully concluded without any complications and there had been no need for general anesthesia.

Conclusions: There is no proven relationship between X linked agamaglobulinemia (XLA) and dental, oral soft tissues. It is emphasized that infection control of these patients is so important during invasive procedures such as tooth extraction and dental vital treatments.

Keywords: Pediatric Dentistry, X linked agamaglobulinemia (XLA), Antibiotic Prophylaxis, Anaphylactic Shock, Dental Treatment

Management of Dens in Dente with Microdontia in Open Apex Tooth with a Chronic Periapical Lesion: A Case Report

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Introduction: Dens in dente the continuation of the enamel fold in the lingual region due to local forces on the tooth bud before calcification of the teeth. It is a rare malformation, showing a wide spectrum of morphological variations such as gemination, microdontia, supernumerary tooth, resulting frequently in early pulp necrosis. Maxillary lateral incisors are the commonest teeth to be affected by this dental malformation.

Case Reports: One year ago, an 11-year-old healthy male patient who referred to Karadeniz Technical University, Department of Pediatric Dentistry clinic, for the purpose of checking was found to have dens in dente in tooth #22 as a result of both intraoral examination and taken periapical x-ray (Fig1,2). The tooth #22 which were begun to root canal treatment at the same session had an apical lesion. After the hard barrier in the apical region had been cleared using long diamond fissure drill, the canal was shaped with the help of gates-glidden drills. Ca(OH)₂ was sent into the canal until the apex was closed. After 6 months the canal was filled using gutta-percha. The patient was followed for 6 months both clinically and radiographically and findings were successful (Fig3,4).

Conclusion: Historically, treatment options were limited to extraction but with the advent of newer elaborate diagnostic tools, endodontic treatment has been a different approach for this anomaly. Dentists have aware of this anomaly because of the risk of apical inflammatory disease. Prophylactic restoration of the development pits of these teeth is important to avoid possible complications.

Keywords: Dens in dente, Root canal treatment, Open apex, Prophylactic restoration

Aesthetic treatment of anterior teeth with prepress laminate: case series

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Introduction: The use of porcelain laminate veneer (PLV) as opposed to metal-ceramic or all-ceramic crowns is a minimally invasive treatment option. PLV have become a routine restorative procedure for treatment of teeth in the maxillary anterior region. Good clinical success rates in terms of esthetics, marginal integration, and occlusion can be achieved at the luting appointment for indirect dental restorations because of technological improvements in dental materials. Minimally invasive PLV have many advantages, such as minimal tooth preparation or no tooth preparation. In addition, there is no need for the administration of local anesthesia before tooth preparation and no need for temporary restoration. Bonding to enamel is the most important advantage of minimally invasive PLV. It was reported that when PLV were supported by enamel tissue, clinical survival rate was higher than for those supported by dentin tissue, due to bond strength between porcelain and enamel.

Case reports: In this case series, treatment with more conservative prepress porcelain laminae of the patients with aesthetic complaints in the anterior region was discussed. Prepress laminate was applied to the teeth of the anterior region in patients whose indications were appropriate. The bonding is made entirely with adhesive systems. In short and long term follow-ups, patients' satisfaction was high and they experienced no problems.

Conclusions: The prepress laminate provide good aesthetic results when used in appropriate indications. The aesthetic expectations of the patients are met with a conservative approach. Dental integrity is maintained and patient satisfaction is increased.

Keywords: aesthetic, laminate, prepress

Papillon Lefevre syndrome: A Case Report

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Introduction

Papillon-Lefevre syndrome (PLS) is a rare autosomal recessive disorder. The disorder is characterized by palmaplantar hyperkeratosis and aggressively periodontitis leading to premature loss of deciduous and permanent dentition at early childhood. Several etiologic factors, for example genetic transmission, immunologic conditions and some types of bacterias have been proposed for PLS. A multidisciplinary approach with involvement of dentist, dermatologist and pediatrician is required for management of PLS cases.

Case Reports

We presented a case of a 13-year-old male who attended our department with chief complaint of missing teeth diagnosed as PLS by panoramic radiography image and clinical photos.

Conclusions

Periodontally hopeless permanent teeth of patient was extracted and he is under follow-up to make prosthesis.

Keywords: Papillon Lefevre syndrome, periodontitis, keratosis

Esthetic rehabilitation of patient with congenitally missing maxillary lateral incisor: a case report

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INTRODUCTION

Hypodontia is a developmental deficiency of one or more teeth in primary or permanent dentition, except for the third molar teeth. The researchers use various terminologies such as congenital dentition, dental apicality, dental agenesis to describe this condition. Hypodontia is one of the most common developmental anomalies.

CASE REPORT

A 34-year-old female patient with congenitally missing maxillary lateral incisor applied to prosthetic dentistry clinic with complaints of esthetics, caused by polydiastema in the anterior region and the old restorations. In the direction of digital analysis, a wax-up was prepared for the patient. Afterwards tooth preparations were made in the guidance of mock-up. The prosthetic rehabilitation was completed with 4 e.max press MT ingot laminate veneers and 2 zirconium porcelain crowns.

CONCLUSION

In 6-month clinical follow-up, the patient stated that she was satisfied with aesthetics, phonetics and function.

Keywords: congenitally missing teeth, diastema closure, esthetic rehabilitation, laminate veneer

Pseudoepitheliomatous hyperplasia: Case report

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Introduction: Pseudoepitheliomatous hyperplasia (PEH) is a reactive epithelial proliferation of epithelium on mucocutaneous surfaces. It's a benign lesion. The differential diagnosis of pseudoepitheliomatous hyperplasia from squamous cell carcinoma may be difficult.

Pseudoepitheliomatous hyperplasia is a benign lesion and its treatment is conservative; squamous cell carcinoma is a malignant tumor which usually requires aggressive surgery. For this reason, differential diagnosis is very important to avoid radical treatment.

Case Report: A 5-year-old female patient, applied to our clinic with complaint swelling in the gingiva. In the intraoral examination, the lesion in the gingiva on between upper santral and lateral teeth was pink, well-circumscribed and 0.5x0.5 cm in size. There was no evidence of radiographic examination. The lesion was excised after initial periodontal treatment. The biopsy material was examined histopathologically and PEH was diagnosed. 6-month follow up showed absence of recurrence.

Conclusion: Pseudoepitheliomatous hyperplasia is confused with squamous cell carcinoma clinically and pathologically. For this reason, more radical treatment options can be avoided with correct diagnosis.

Keywords: Epithelial hyperplasia, hyperplasia, pseudoepitheliomatous hyperplasia

Indirect restoration of the tooth that has excessive loss of structure: 3 case reports

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Introduction: The purpose of this presentation is; to describe indirect restoration of teeth with excessive loss of material.

CASE1: A 26-year-old female patient was admitted to our clinic due to pain in 46 teeth. After the treatment of the canal, we decided to perform indirect restoration of the tooth with excessive loss of material. The cavity was prepared and undercuts were eliminated. A glass ionomer cement (SpofaDental) was placed as the base material. Impressions were taken with a polyether impression material (Soft Monophase, 3M ESPE). Temporary filling material (DiaTemp) was placed in the cavity. Indirect composite material (Solidex, Shofu) was applied on models and polymerized with visible light, following in indirect composite oven (Solidilite V, Shofu). After adopting the restoration to the cavities, it was luted with dual-cure cement (Relyx Ultimate, 3M ESPE) and completed polishing and finishing procedures. (Soflex)

CASE2: A 35-year-old female patient applied to our clinic for restoration of 16 teeth after canal treatment. The cavity was prepared and undercuts were eliminated. Impression and polymerisation process are completed as first case. Restoration luted with dual-cure cement.

CASE3: A 21-year-old female patient was admitted to our clinic due to pain in 46 teeth. The restoration was removed and cavity was cleaned and undercuts were eliminated. Theracal LC (Bisco Inc) was placed on the bottom of the cavity and placed glass ionomer cement base material. Impression and polymerisation process are completed as first case. Restoration luted with dual-cure cement.

Conclusion: Indirect restorations, shown as an alternative to conventional treatment in excessive destruction crown.

Keywords: aesthetic, dual-cure resin cement, indirect restoration

DiGeorge Syndrome (22q11 deletion syndrome)

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Introduction: DiGeorge Syndrome is caused by the deletion of chromosome 22 in 11.2 part. The incidence of 22q11 deletion is approximately seen once in every 4000 births and is inherited in autosomal dominant manner. This syndrome is also described as CATCH 22 or Velocardiofacial Syndrome. Cardiac defect, cleft palate, immunity deficiency due to thymic hypoplasia, renal anomalies, abnormal faces and hypocalcemia as a result of hypoparathyroidism are among the symptoms of this syndrome.

Case Report: A 7 year-old boy with DiGeorge Syndrome was referred as a patient to Marmara University, Faculty of Dentistry, Department of Pediatric Dentistry for dental caries. He is a non-inbred individual and has four siblings who are healthy. The patient has cardiac defect, cleft palate, immunological problems, hearing and speaking problems. He was reported to have heart, cleft palate and ear tube operations in the past.

In the conducted intra-oral examination, dental caries and Molar Incisor Hypomineralization (MIH) were observed. None of his caries was symptomatic but dentinal sensitivity is present in all of his four permanent first molars. Restorations of primary molars were made with compomer resin and permanent molars were restored with glass hybrid ionomer. APF gel was applied to full mouth and oral hygiene instructions were given.

Conclusions: Patients with DiGeorge Syndrome are at risk of bacterial endocarditis due to cardiac defect. These patients should attend their dental appointments regularly and apply oral hygiene instructions carefully.

Keywords: DiGeorge, CATCH22, Velocardiofacial

Lymph node calcifications due to tuberculosis

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Introduction: At the present time tuberculosis is a major health problem, especially in developing countries. The lymph node tuberculosis seen in the cervical region is the most common condition of extrapulmonary tuberculosis. Cervical tuberculosis lymphadenitis, which can be seen frequently in the posterior cervical region and supraclavicular region, can be detected clinically and histologically during the period of the disease. It can be observed radiologically in the form of calcification focuses after healing.

Case reports: 57-year-old female patient with no systemic disturbance from history was learned that 50 years ago had tuberculosis. Clinically, scar tissue was observed in the surgical intervention performed in the posterior and anterior cervical lymph node regions. On the panoramic radiogram taken from the patient, multiple irregular lymph node calcifications were detected in the left cervical region.

Conclusion: Radiographically seen calcifications in the head and neck region may be due to different reasons. It is important that the patient's story is deepened and put into proper recognition.

Keywords: lymph nodes, panoramic radiogram, tuberculous lymphoid calcification

Orthodontic treatment of a patient with functional class II malocclusion due to upper incisors' retrusions

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Introduction: The aim of this case report is to present the orthodontic treatment of an adolescent female patient with functional skeletal class II malocclusion due to excessive upper incisors retrusion

Case Reports: A thirteen years old female patient with chief complaint malalignment and poor aesthetic dental appearance were evaluated in terms of orthodontics. Skeletal class I and dental class II relationships, extruded upper incisors, deep bite and distally forced closure of lower jaw were seen at radiographic and intraoral evaluation. In treatment plan, it was decided to apply fixed orthodontic treatment without permanent tooth extraction. After applied fixed orthodontic appliances, upper anterior incisors were protruded, and all teeth were aligned during levelling stage. Later, fixed orthodontic treatment was completed when the lower jaw repositioned to its ideal position with the upper jaw. The patient was treated successfully. At the ends of treatment, dental class I molar and canine relationship was achieved. Upper anterior incisors teeth were protruded to their proper position and deep bite malocclusion was treated. All complaints of the patient have been solved. Satisfying esthetic and functional results were obtained.

Conclusions: Patients with functional class II malocclusion due to excessive anterior upper incisors retrusion can be treated with fixed orthodontic mechanics. Orthodontic treatment improves aesthetics that will affect people's perspective on life.

Keywords: Functional class II malocclusion, Upper incisor, Retrusion

Correction of orthodontic problems of a patient with congenitally missing lateral incisors

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Introduction: Orthodontic treatment of a patient with congenitally missing lateral incisors and open bite was presented in this case report.

Case Reports: A fourteen years old female patient with malalignment and poor aesthetic dental appearance were evaluated orthodontically. Skeletal class III and dental class I relationships with anterior openbite were detected at radiographic and intraoral evaluations. In addition, maxillary lateral incisors were congenitally missed. In treatment plan, it was decided to apply hyrax with reverse pull headgear and upper canine substitution for congenitally missing maxillary lateral incisors. Reverse pull headgear was used without hyrax activation during a year. Reverse pull headgear and hyrax were removed when the upper jaw was repositioned. After using reverse pull headgear, fixed orthodontic appliances were applied and lower first premolars were extracted. Fixed orthodontics appliances were supported with class III elastics. The patient was treated successfully. At the ends of treatment, dental class I molar relationship was achieved. Open bite malocclusion was treated. All complaints of the patient have been removed. Satisfying aesthetic and functional results were obtained.

Conclusions: Canine substitution can be a treatment alternative for congenitally missing maxillary lateral incisors. Case selection is important when considering canine substitution in cases with a missing lateral incisor. At the ends of orthodontic treatment, with upper canine substitution acceptable aesthetic and function were obtained.

Keywords: Correction, Congenital, Missing lateral incisors

Atypical Dentin Dysplasia Type I: A Case Report

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Introduction: Dentin dysplasia is a rare defect of dentin development with an autosomal dominant pattern of inheritance. We report a case of atypical features of dentin dysplasia type I in a child.

Case Report: A 9-year-old male patient referred to the Istanbul University, Faculty of Dentistry, Clinics of Pediatric Dentistry. His medical history revealed that the patient had high blood pressure during the first week after birth. The intraoral clinical examination showed the presence of the following teeth: 11, 12, 13, 14, 15, 21, 22, 23, 24, 26, 31, 32, 33, 34, 35, 36, 41, 42, 43, 44, 46, and 85. Panoramic radiographic examination confirmed that teeth 26, 36, and 46 presented no root formation; teeth 11 and 21 had short, thin roots; teeth 13, 23, 33, and 43 presented alteration in the pattern of root formation. According to the father, tooth 16 had been extracted due to an extensive carious lesion. Dental care included restoration with composite resins in teeth 26, 36, and 46.

Conclusions: The progression of the case is under continuing evaluation. The clinical and radiographic characteristics observed in this patient are different from those reported in the literature, which suggests that this may be a variation of dentin dysplasia type I expression.

Keywords: Dentin dysplasia, root malformation, short roots

Combined treatment approach with implant-supported prosthesis: A case report

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Introduction: Implant supported overdentures offer many practical advantages over conventional complete dentures and removable partial dentures. These include decreased bone resorption, reduced prosthesis movement, better esthetics, improved tooth position, better occlusion, increased occlusal function and maintenance of the occlusal vertical dimension. Additionally removable partial dentures may offer an attractive treatment option for an edentulous patient, as they may combine an implant supported fixed partial dentures in the anterior segment with a removable appliance in the posterior areas.

Case: A 52-year-old female patient reported to the Department of Prosthodontics, Gaziosmanpaşa University, with the chief complaint of missing teeth. In this case report prosthetic rehabilitation of a maxillary and mandibular edentulous patient was performed. Two implants in the upper jaw anterior segment and four in the lower jaw were placed. Implant supported fixed partial denture and removable partial denture with precision attachments were applied to upper jaw. Locator retained-implant supported overdenture was applied to the lower jaw. The patient was happy with the aesthetics of the prosthesis. Post-placement checkup was done after 24 hours, 1 week and 1 month. She was able to masticate and speak.

Conclusion: Implant supported prosthesis can be chosen as an appropriate treatment option. A satisfying restoration can be achieved with fewer implants with combined treatment

Keywords: overdenture, implant, removable partial dentures

Prosthetic rehabilitation of a patient with soft palate defect and velopharyngeal insufficiency: a case report

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Introduction: Obturator is a prosthesis which is used to close defects in maxilla as a result of trauma, congenital malformations and surgical operations of malign or benign neoplasms. Pharyngeal obturator prostheses are used to rehabilitate patients with soft palate defects, velopharyngeal insufficiency and restore the congenital or acquired defects of the soft palate for adequate closure of palatopharyngeal sphincter. Obturation of the defect area is necessary, otherwise it may lead to velopharyngeal disfunction, hypernasality and regurgitation of food and liquids.

Case Report: In this case report, prosthetic treatment of a 53-year old female patient is presented with a pharyngeal obturator. It was determined that the patient was had an operation for oropharynx malign tumor 15 months ago and then had radiotherapy. Because of this maxillary defect, patient had malnutrition and phonetic problems. After the radiographic and intraoral examination of the patient, it was decided to make the lower and upper removable partial prosthesis by keeping teeth in the mouth. A functional impression was taken from the defect area and a cast model was produced. The permanent removable prosthesis was prepared in that cast model.

Conclusion: During the 3-month follow-up period of our patient, no problems were encountered. The patient's speech had developed day by day due to prosthetic treatment. The results were satisfying for patient.

Keywords: maxillary defect, pharyngeal obturator, velopharyngeal insufficiency

Prosthetic rehabilitation of an edentulous mandible with All-on-4 Immediate-Function Concept: A case report

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Introduction

Immediate implant function has become an accepted treatment option for fixed restorations in edentulous cases.

Case Report

This clinical case report presents a 69-year-old patient with edentulous mandible rehabilitated with immediate loaded implants using the All-on-Four concept.

Mandibular complete denture were fabricated using conventional techniques before implant surgery. Four implants were placed according to the All-on-four concept. After implant installation, the borders of the mandibular denture was modified, the occlusal contacts were checked and corrected. The implants were immediately loaded at the day of surgery. This provisional implant-supported mandibular denture was used for 3 months. The final hybrid fixed restoration with porcelain fused to metal restoration was fabricated. Radiographic assessment of the marginal bone level was performed after 6 months in function.

Conclusion

Immediate loaded implants using the All-on-Four concept is an advantageous and effective treatment protocol for edentulous cases especially when fixed prosthetic rehabilitation is preferred.

Keywords: All-on-four, hybrid denture, immediate loading, prosthetic rehabilitation

Effects of Y Plate and Chin Cup Therapy on Patient with Skeletal Class III Malocclusion: A Case Report

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Introduction: The aim of this case report was to present the treatment outcomes of Y plate and chin-cup therapy on a preadolescent patient with skeletal class III malocclusion.

Case reports: A 11 year 4 month old female patient's main complaint was mandibular prognathie. Angle class III molar relationship, negative overjet, anterior cross-bite, positive overbite and posterior cross-bite were observed clinically. Cephalometric evaluation showed that skeletal class III malocclusion (ANB: -2.7°), normal growth pattern, -3 mm overjet and 2 mm overbite. The treatment objectives were to obtain class I molar relationship, balanced soft tissue profile and improvement functional malocclusion. Y plate was applied to correct posterior and anterior crossbite, three screws were activated 2 times a week (per 0.25 mm activation) and chin cup was applied to retardation of mandibular growth. After getting a positive overjet and orthognatic profile, the patient was used chin cup only at nights until the post pubertal period for avoid relapse. This patient was followed for 2 years and 6 months.

Conclusion: As the outcomes of Y plate and chin cup treatment, skeletally Class III malocclusion and negative overjet were corrected (ANB: 0.7° , overjet: 1 mm), vertical dimensions were increased and balanced soft tissue profile was provided.

Keywords: Y plate, chin cup, skeletal class iii malocclusion

Application of zirconia restoration after gingivectomy on maxillary anterior region

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Introduction

There are different options for prosthetic rehabilitation of anterior teeth. Clinicians may prefer zirconia restorations on anterior and premolar teeth due to its sufficient esthetic and functional properties in daily routine. Prosthodontics also may get help from gingival surgery to optimize the esthetic of restorations.

Case reports

A 50-years-old female patient who applied Atatürk University, Faculty of Dentistry, prosthodontics clinic complained about marginal discoloration, secondary caries and post-operative sensitivity on maxillary anterior teeth which were restored with composite resin previously. The patient had healthy periodontal tissues. She also had very high smile line resulted in gummy smile. Firstly, the gummy smile was operated with gingivectomy and the lip repositioning operation wasn't accepted by the patient. The length of anterior teeth was increased with conventional surgical gingivectomy and gingivoplasty without respective osseous surgery. The prosthetic treatment was started after 2 weeks following gingivectomy. After the analysis of occlusion, tooth preparation with shoulder at gingival margin was done for all teeth. Gingival retraction was applied before taking impression. Provisional crowns was prepared to prevent from dental sensitivity and supply the healing of gingival tissues. Zirconia restorations was prepared 3 week later and cemented with dual-cure resin cement. An occlusal splint was prepared to protect the zirconia restorations against the bruxism.

Conclusions

Clinicians may choose suitable esthetic and functional materials according to the cases. Gingivectomy may help to clinicians to improve the esthetic appearance of final prosthetic restoration by lengthening the clinical crown.

Keywords: Gingivectomy, crown lengthening, zirconia

Single tooth replacement with fiber-reinforced bridge: a case report

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Introduction:

In contemporary dentistry implant treatment is the prominent method for replacing single missing tooth. However the amount of transverse bone present is often a limiting factor. Some systemic conditions, social and financial issues can also be considered as contraindication for implant treatment. Conventional prosthetic alternatives should also be considered in such circumstances. Here we present our case in which we replaced a single missing tooth with a fiber-reinforced adhesive bridge.

Case Report:

A 35-year-old female patient who has a missing right upper canine tooth (tooth number # 13) due to periodontitis, referred to the clinic. As the amount of transverse bone was insufficient in intraoral and radiographic examination, bone graft and implant treatment was proposed. Patient refused the procedure because of costs and limited time. To consider grafting in the future, she also didn't want to get her teeth prepared. A fiber-reinforced adhesive bridge was planned. The adjacent teeth were minimally prepared for retention of the Glass fiber (Angelus Interlig, Londrina, PR, Brasil) and it was fit to the edentulous span. Pontic was fabricated with composite (Estelite Sigma Quick, Tokuyama, Japan) and cemented using 37% orthophosphoric acid (Alpha Etch Jel, Rio de Janeiro, RJ, Brazil), bonding (Bond Force, Tokuyama, Japan) and flowable composite (Estelite Flow Quick). The patient has been using this restoration for 2 years without any problem.

Conclusions: Due to the recent developments in fibers, composites and adhesive systems, fiber-reinforced bridges might be used as an alternative treatment modality to single tooth replacement when implants are not suitable.

Keywords: restorative dentistry, fiber bridge, dental composite materials

Aesthetic rehabilitation of the anterior region with direct composite resin applications: case series

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Introduction: Increasing the aesthetic expectation of the patients and the desire not to damage the healthy tooth tissues during the treatment have increased the orientation towards direct composite resin applications. Aesthetic rehabilitation of three patients with aesthetic problems in the anterior region was aimed with direct composite resin application in these cases.

Case-1: A 16-year-old female patient was admitted to our clinic with complaints of a right upper peg lateral and left upper congenitally missing lateral incisor. The examination revealed that the patient's occlusion was favorable for composite resin application and the periodontal condition was healthy. First color selection was made. Following isolation, the areas to be restored were etched with 37% phosphoric acid. After washing and drying, adhesive system was applied. Nano filled composite material was applied with the aid of a transparent band extending to the gingival sulcus until the appropriate contour was achieved. Then finishing and polishing procedures were made taking into account the patient's wishes.

Case-2: A 28-year-old male patient was admitted to our clinic with complaints of aesthetic problems due to persistent lateral deciduous teeth. The patient did not accept tooth extraction and orthodontic treatment and demanded treatment of his teeth directly with composite restoration. First the decay of right lateral's mesial was removed. Then the teeth were restored in accordance with the above procedures.

Case-3: A 35-year-old female patient was admitted to our clinic with complaints of anterior diastema. Diastema was closed with the same procedures above.

Conclusions: With a direct composite resin application, aesthetics that will delight the patient can be achieved in a short time without damaging the healthy dental tissue.

Keywords: aesthetic, direct composite resin, diastema, peg lateral incisor

Minimal Invasive Aesthetic Applications In Fluorosis: A Case Report

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Objectives: To obtain a natural aesthetic appearance to the patient who complains about discoloration due to fluorosis and the gap between the upper central teeth. The case was treated with office bleaching and direct composite resin application.

Methods: A 32 year-old female patient applied with yellow-brown discoloration due to fluorosis in the upper central teeth. The patient was informed about treatment procedure. Then tooth surfaces were cleaned. After that gingival barrier (Opal Dam Green, Ultradent) was used for isolation. A bleaching agent (Opalescence Boost, Ultradent) with 40% hydrogen peroxide content was applied according to the manufacturer's instructions for 15 minutes with light activation (SAAB) and was repeated twice in the same seance. At the first month of control, diastema closure procedure was finished after the success of whitening. A total etch (N-Etch, Ivoclar Vivadent) procedure with universal adhesive resin (Tetric Universal, Ivoclar Vivadent) was preferred. Enamel-colored composite resin (A2E, Clearfil Majesty Es-2, Kuraray) was adjusted to the palatinal and aproximal part of the restoration. The restoration was completed by applying dentin-color composite resin (A2, Clearfil Majesty Es-2, Kuraray) and enamel-color composite on upeer surface of restoration. Restorations was finished with aluminum oxide discs (Supersnap, Shofu) and polished with silicone polisher (Silicone-Polishers, Eve Ernst Vetter). Photographs were taken and archived in the third month control.

Conclusion: The office bleaching method provides satisfactory results in fluorosis-based discoloration and the gaps between the teeth can be successfully closed with direct composite resin application.

Keywords: Aesthetic, Diastema, Florozis, Office bleaching

Primary reconstruction technique after radical maxillectomy for a patient who was squamous cell carcinoma in the hard palate

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Introduction: The treatment of malignant tumors like squamous cell carcinoma in the palate is the surgical removal of these tumors. After the removal of the malignant region, the patient has difficulty speaking, chewing and swallowing. It is appropriate to use a temporary obturator in order to gain the function and aesthetic that the patient lost in such cases. A removable temporary maxillary obturator is an alternative treatment method until a definitive obturator is manufactured. This case presents a primary reconstruction technique after radical maxillectomy for a patient who was squamous cell carcinoma in the hard palate.

Case Report: An old male patient diagnosed with squamous cell carcinoma in the hard palate was referred to Gaziosmanpasa University, Faculty of Dentistry. There was only one tooth (23) at the maxilla. The malign tumor was located in the left half of the hard palate. The region where the tumor was located was resected and the defect region was left to heal for 2 weeks. The defect region was rehabilitated with an open bulb obturator with chromium cobalt framework 2 weeks after surgical resection. The fabricated temporary obturator closed the hard palate and overcome chewing, speaking and swallowing problems.

Conclusions: The removal of the hard palate region diminishes the effectiveness of swallowing and chewing and the speech becomes difficult. The mental condition of the patient is negatively affected in this process. The temporary obturator improve the patient's psychological and functional until a definitive obturator is manufactured.

Keywords: Maxillofacial obturator, squamous cell carcinoma, hemimaxillectomy

Myofunctional Therapy With A Trainer System In A Juvenile Patient: Case Report

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Introduction: The trainer system has been developed to combine the alignment of teeth with myofunctional therapy. The appliance is designed to actively regulate the tongue position, orofacial muscles and breathing habits and to arrange the anterior teeth. Soft tissues must be evaluated before orthodontic treatment because it affects dental position. Due to the myofunctional effect in the trainer system, it is ensured that the soft tissues are directed correctly.

Case Report: A chronological age of 9 years and 2 months, the male patient in the juvenile period referred to our clinic because the upper teeth were in front. Clinical and model studies revealed that the patient had a class II division 1 anomalies, increased overjet (+ 9mm) and overbite (+ 6mm), hypo-function in the upper lip, and lower lip suction habit during the early mixed dentition period of the patient. It was decided to use the patient trainer system and t4k phase 1 treatment was applied for this purpose. After about 9 months of follow-up, the lower lip sucking habit was lifted. Diastemas and overjet have been reduced due to the retroclinization of the upper incisor teeth.

Conclusion: The T4K trainer has helped improve myofunctional habits during the early mixed dentition period. The single piece and easy to use appliances have greatly contributed to both dental and facial development.

Keywords: myofunctional therapy, trainer system, juvenile patient, increased overjet

A Rare Variation of Mandibular Condyle: Three Case Reports

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Introduction:

Bifid and trifid mandibular condyle is a rare variation of the mandibular condyle. Their exact etiology is still unclear. Teratogenic drug use, trauma, infection, exposure to radiation and genetic tendency may lead to these variations. The aim of this study is to indicate clinical and radiographic findings of bifid and trifid mandibular condyle in three cases.

Case Reports:

At the first and second cases, 41-year-old male patient and 33-year-old female patients, respectively, were referred to Dentomaxillofacial Radiology, Faculty of Dentistry, Akdeniz University for routine dental examination. In the male patient, left trifid mandibular condyle and in the female patient, right bifid mandibular condyle were diagnosed incidentally during routine panoramic examination. Neither patient complained of clicking or pain or both, and trismus was not present in either. In the third case, a 46-year-old female patient was referred to Dentomaxillofacial Radiology, Faculty of Dentistry, Akdeniz University for bilateral pain in front of the ear. The patient had bilateral clicking at the temporomandibular joint examination. There was muscle tenderness on palpation and trismus. At the panoramic examination, a trifid condyle was identified on the left side.

Conclusions:

Most bifid and trifid mandibular condyle cases are asymptomatic and are found by chance during routine panoramic examination. Because neither patient complained of symptoms, treatment plans were not made for the first and second cases. On the other hand, the third case was referred to the Department of Dentomaxillofacial Surgery, Faculty of Dentistry, Akdeniz University for further treatment planning.

Keywords: Rare variation, trifid mandibular condyle, bifid mandibular condyle

Rehabilitation of Young Patient with Extensive Tissue Loss with Andrews Bridge System: A Case Report

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Introduction: A patient with several missing teeth in the aesthetic region along with severe ridge defect poses a greater challenge for prosthodontic rehabilitation. In such cases treatment using fixed partial denture (FPD) may not be preferred because of the inadequacy of the abutment teeth due to the width of the edentulous area and the replacement of the losses in the soft tissues. Removable partial denture, which creates an uncomfortable situation due to palatal and lingual coverage. Implant-supported restorations are very successful, but they are of questionable prognosis in case of large ridge defects. Andrews is a combination of fixed and removable systems and extend ridge defect using natural teeth as abutments for its fixed component followed by a removable piece.

Case: A 37 year-old male patient referred to department of the prosthodontics at Atatürk University, faculty of dentistry with the complaints of edentulous in mandibular premolar region associated with extensive support soft tissue loss. The teeth which were selected as abutments were prepared according to the principles of full coronal restoration. Silicon-based impression was sent to the laboratory. After the check of fabricated metal infrastructure, the final restoration prepared in the laboratory suitable for the colour of both tooth and gingiva was successfully applied to the patient. The patient is satisfied with both the functional and the aesthetic restorations.

CONCLUSION

With the Andrews Bridge System, aesthetic and functional satisfactory results can be obtained in the prosthetic rehabilitation of young patients, especially those with large anterior bone and soft tissue loss.

Keywords: Andrews Bridge System, Extensive Ridge Defect, Fixed Removable Denture

Treatment of anterior cross-bite with removeable appliances: a case series

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Introduction: Anterior crossbite is a malocclusion type characterized by the presence of the anterior upper teeth in the lingual position relative to the lower anterior teeth. In primary dentition, crossbite correction is very important; because these types of malocclusions do not show spontaneous resolution and may cause abnormal abrasion of the lower incisor teeth, thinning of the lower labial alveolar bone or gingival recession. One of the effective methods that can be used to correct the anterior crossbite is the removable orthodontics appliance. This case report was aimed to treat the patients who applied to our department and who had an anterior cross-bite diagnosis.

Case Report: Two 9-year-old healthy male patients referred to our clinic due to visual disturbances in their upper incisor teeth were included in the study. Anterior cross-bite was detected in the intraoral examination of patients with mixed dentition. We decided to use a removable appliance with the bite plane and the labiolingual barbell to stabilize the occlusion. After 2 weeks we checked the appliances. After about 1.5 months, it was determined that the anterior cross-bite of the patients was improved successfully.

Conclusion: It is possible to treat the cross-bite seen in one or two teeth in mixed dentition period with removable appliances without further orthodontic treatment. If the malocclusion does not appear in the permanent dentition, this will suggest a habitual bite occlusion and confirm that the treatment made during the primary dentition's period is the right approach.

Keywords: removable appliance, anterior crossbite, pediatric dentistry

Oral findings in dizygotic twin with down syndrome: A case report

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Introduction: Down syndrome (DS) is one of the most common congenital autosomal anomalies that is seen in 800-1000 births. Dizygotic twins with DS have been rarely seen in about 2.5 million births. In this case report, atypical oral findings of dizygotic twin with DS have been presented.

Case Reports: Down Syndrome diagnosed 5-year-old dizygotic twin males were referred to SDU, Faculty of Dentistry, Department of Pediatric Dentistry by their parents for dental examination. In medical history, it was learned that patients had hypothyroidism and congenital heart disease. In intraoral examination, macroglossia, fissured tongue, tongue thrusting, malocclusions such as diastemas, midline shift, open bite were not observed. Both had deep dentine caries in primary teeth. The dmft scores of patients were 0,45 and 0,4. It was seen that only clinical crowns of upper lateral teeth were conical and the others were normal size. No hypoplastic defects were seen in teeth. According to radiographic examination, both patients had congenitally missing eight permanent teeth (12,15,22,25,31,35,41,45). In radiographic examination of the family members, it was observed that their father and 20-year-old sister had congenitally missing teeth (12,22). However, congenitally missing tooth in their mother had not been seen.

Conclusions: Typical oral findings common in children with Down syndrome were not seen in this dizygotic twin with Down syndrome. Since there are lots of caries and congenitally missing teeth, the importance of early treatment of these patients is emphasized once again in this case report.

Keywords: Dizygotic twin, Down syndrome, Oral findings

Can we support the treatment of Tmj disorders by splint: a case report

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Introduction:

Temporo mandibular dysfunction is a single clinical entity characterized by a variety of musculo-articular signs and symptoms of the jaw: jaw pain, joint sounds during jaw movements and difficulties opening.

Material and Methods:

This is a clinical study realized at the Blida dental clinic, the female patient 47 years old consulted for a functional and aesthetic motif, her anterior occlusion is inverted and non-functional associated to Tmj disorders

After a complete clinic examination we use axiography (Quick axis of the firm Fag) and occlusal analyze on the SAM II articulator and we decide to begin our therapy by indented splint in centric relation.

Results and Discussion:

The wearing of occlusal splint fabricated in centric relation was for 3 months, there was decrease of pain and articular cracking, occlusion of our patient was reestablished in a central relation, there was mandibular repositioning during therapy, as demonstrated by the change in occlusal contacts on the splint.

The prosthesis restoration fixed and removable stabilizes the occlusion and the axiographic registration before and after treatment shows the change of the condylar position following the change of the occlusion of our patient

Conclusion:

the restoration of the both arches by the occlusal splint and the prosthetic restorations allowed to harmonize the mandibular movements and to guarantee a perennial result of the therapy adopted by our team.

Keywords: prosthodontics restorations, Tmj disorders, axiography, occlusal splint, centric occlusion

Bleaching of non-vital teeth and aesthetic restorative approaches: 3 Case Reports

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Introduction: Nowadays, both children and adults pay more attention to their appearance. The method of abrasion is the first treatment that comes to mind in teeth with internal discoloration. However, dental bleaching may offer a safer alternative that can be completed with less chair time and without harming dental structures. In these case reports, it was aimed to present the treatment of upper anterior teeth with yellow-brown coloration after canal treatment by bleaching.

Case Reports: After examination of two patients, having esthetic concerns of upper teeth discoloration, with no complaints of hypersensitivity the following indications were identified. A yellow-brown discoloration due to root canal treatment was observed in the upper left central incisor of a 35-year-old male patient in Case 1, the upper right central incisor of a 40-year-old female patient in Case 2 and, the upper right central incisor of a 32-year-old female patient in Case 3.

It was planned to apply the bleaching treatment. Carbamide peroxide was used for bleaching. The agent was renewed every two days (whiteness Super-endo, FGM, Brazil). After bleaching application, yellow-brown colorings decreased. Teeth were restored with a nanohybrid composite resin (Clearfil Majesty S2, Kuraray, Japan).

Conclusion: The most important advantage of non-vital bleaching treatment with complications such as cervical root resorption and tooth re-coloration; is to protect the natural tooth structure without need of prosthetic restoration. It was decided to evaluate the patients in periodic clinical and radiological controls regarding possible complications.

Keywords: anterior aesthetic, devital bleaching, discoloration

Direct interproximal diastema closure with composite layering technique: two cases report

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Aim: Presence of diastema between anterior teeth is often considered an onerous esthetic problem. Various treatment modalities are available for diastema closure. However, not all diastemas can be treated the same in terms of modality or timing. The extent and the etiology of the diastema must be properly evaluated. Proper case selection is of paramount importance for a successful treatment.

Materials-Methods: Clinical examination of the two patients with non-aesthetic complaints due to space in the upper anterior teeth revealed the following Findings:

Case A: A 16-year-old female patient complaint of gaps between her anterior teeth after orthodontic treatment. There were composite residues on the teeth's buccal surface. The teeth were vital and gums were healthy.

Case B: A 15-year-old male patient with a complaint of non-aesthetic anterior teeth admitted to our clinic. There is discoloration on the buccal surface of 12 tooth. The teeth were vital and gums were healthy.

In all two cases, the diastema areas were restored with composite restorative materials, taking the appropriate choice of colors into consideration.

Conclusion: Maintaining an optimum oral hygiene and regular clinical controls are essential in order to have a long-term clinical success and prevent the disadvantages of incremental direct composite resin technique such as marginal discolouration, fracture and possible periodontal problems. This method provides a satisfying esthetic and durability while protecting dental tissues as an alternative to prosthodontic approaches.

Keywords: aesthetic, diastema closure, direct composite resin

SURGICAL TREATMENT OF A LARGE DENTIGEROUS CYS

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OBJECTIVE: The aim of this study is to present the surgical treatment of a large and asymptomatic dentigerous case

Introduction: Dentigerous cysts are defined as a cyst originated by follicle of dental crown of a tooth unerupted. Frequently they are seen over a wide age range of 20-30 years old. The incidence of dentigerous cyst in males is higher than female. They are often seen with mandibular third molar, maxillar canine and maxillar third molar teeth. Usually they are diagnosed on routine dental radiographs and there is usually no pain or discomfort associated with the cyst unless it becomes secondarily infected.

Case Reports: A 22-year-old man admitted to our clinic with a complaint of cyst on routine radiography.. Radiographic examination revealed that radiolucent lesion associated with mandibular impacted third molar and extended to basis mandibularis. The patient had no complaints in the area concerned. Under local anaesthesia, second and third molars were extracted ,the lesion was totally enucleated with its capsule and wound margins were primary closed. After the operation, histopathologic examination confirmed the diagnosis of an dentigerous cyst

Conclusion: This article describes surgical treatment of a non-syndromic large dentigerous cysts.

Comparison of CAD/CAM materials' color stability

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Aim: In-vitro comparison of the color stability on different nanocomposite resin and CAD/CAM materials.

Material & Method: CAD/CAM restorative materials Lava Ultimate(3M ESPE), Cerasmart(GC,), VITA Enamik(VITA, Zahnfabrik), VITA Mark II(VITA, Zahnfabrik), IPS e.max CAD(Ivoclar Vivadent), IPS Empress CAD(Ivoclar Vivadent), VITA Suprinity(VITA, Zahnfabrik), and a nanocomposite resin Filtek Ultimate (3M ESPE) were sliced 1mm in thickness. Nanocomposite specimens were packed into a steel mold. The color measurements were performed with a spectrophotometer. The specimens were thermocycled respectively 1000 and 5000 cycles and then all the materials were exposed the coffee solution respectively for one week and four weeks. ΔE formula was calculated. The results were assessed using a Kruskal Wallis, Mann Whitney U, Wilcoxon Test ($p=0.05$).

Results: Regarding the analysis of color differences, significant differences in ΔE values were detected ($p<0,001$). The highest color change was seen in the nanocomposite resin($\Delta E=9,28$) and the color change was beyond clinical acceptability for Filtek Ultimate($\Delta E=9,28$), Lava Ultimate($\Delta E=6,12$), Cerasmart($\Delta E=4,68$), Vita Enamik($\Delta E=4,15$) and Vita Mark II($\Delta E=3,35$) materials. The least color differences(ΔE) were 2,57 for IPS emax, 2,94 for Vita Suprinity and 3,07 for IPS Empress materials.

Conclusion: The highest color changes were found above the clinically acceptable limit in Filtek Ultimate, Lava Ultimate, Cerasmart, Vita Enamel and Vita Mark II, respectively. In contrast, IPS e.max remains at clinically acceptable limits in Vita Suprinity and IPS Empress.

This study was supported by Kirikkale University Scientific Research Project Office.

Keywords: CAD/CAM materials, color stability, stainability

Influence of polishing techniques on the surface roughness of hybrid CAD/CAM materials

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Aim: The purpose of this study was to measure the surface roughness of hybrid computer-assisted design/computer assisted machining (CAD/CAM) restorations using several polishing techniques.

Material-Methods: Two hybrid CAD/CAM materials (GC Cerasmart and Vita Enamic) and 5 polishing techniques were tested. One hundred specimens were prepared by cutting blocks into standardized pieces of 12x 10x 1 mm (n=10). The specimens will be randomly divided into five polishing techniques: 1) Control group: unpolished composite resin surface, 2) Optiglaze, 3) Occlubrush, 4) Prisma Gloss and 5) Gradia diapolisher. Polishing quality was measured with a profilometer (Ra values). Six measurements were taken for each sample. The data were statistically analyzed using analysis of variance (ANOVA) and Tukey's test ($\alpha = 0.05$).

Results: The mean (\pm SD) roughness values obtained for GC Cerasmart were: $0.6 \pm 0.02 \mu\text{m}$; $0.58 \pm 0.13 \mu\text{m}$; $0.31 \pm 0.08 \mu\text{m}$; $0.32 \pm 0.08 \mu\text{m}$; and 0.31 ± 0.03 . For Vita Enamic, the mean (\pm SD) roughness values were: $0.52 \pm 0.04 \mu\text{m}$; $0.61 \pm 0.17 \mu\text{m}$; $0.5 \pm 0.1 \mu\text{m}$; $0.37 \pm 0.06 \mu\text{m}$; and $0.45 \pm 0.18 \mu\text{m}$. On GC Cerasmart, Occlubrush exhibited lower Ra values than Vita Enamic ($p < 0.05$). Optiglaze polishing technique was not effective at reducing surface roughness of both hybrid CAD/CAM materials ($p < 0.05$).

Conclusions: The surface roughness of hybrid CAD/CAM materials can be affected by the material type and the applied surface polishing techniques.

Keywords: CAD/CAM materials, polishing techniques, surface roughness

Effect of a New Toothpaste Containing Ginger on Early Enamel Lesions

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Aim: With the progress of science, the use of plant extracts as an alternative treatment source becomes increasingly important as the pharmaceutical properties of plants are revealed.

In our study we compared the remineralizing effect of a natural product, ginger honey mixture, with microhardness and scanning electron microscopy findings in lesions in different depths.

Material-Methods: Enamel samples taken from teeth that meet certain criteria were separated into 3 groups (n =35) and stored at different times in demineralization solution. The lesions were then divided into 3 subgroups (n=10). One group was held for control purposes only in an artificial saliva solution and another group was brushed with toothpaste containing NaF at certain intervals and mixture of toothpaste containing ginger and honey was applied the last group (Gumgumix, Beka ilaç, Türkiye). After remineralization and demineralization, samples were examined by Scanning Electron Microscopy and microhardness values were measured.

Results: When the change after remineralization in microhardness measurements is analyzed according to the groups; In the second and third remineralization groups, the amount of increase in microhardness in teeth remineralized with toothpaste containing ginger-honey was significantly higher than the other groups. In the third demineralization depth group in the SEM examinations after remineralization, it is seen that after the remineralization with NaF and ginger-honey containing dentifrice, the interstitial areas in the crystal structure are filled and remineralized again.

Conclusions: In conclusion, the application of toothpaste containing ginger-honey showed more remineralization effect in all demineralization depth groups than NaF application.

Keywords: Early enamel lesion, Ginger, microhardness, Remineralization

Effect of demineralization time on hardness and depth of an enamel caries lesion: an in vitro study

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Aim: Consuming excessive acidic foods, bad oral hygiene, night snacks increase acidic interaction on tooth surface which causes mineral loss on enamel. Our purpose was to investigate the correlation of demineralization time with microhardness and depth of an enamel caries lesion.

Materials & Methods: 60 freshly extracted human teeth were mounted in acrylic resin and randomly divided into 5 groups (n=12). After smoothing the surfaces with sandpaper discs, groups were stored in the same demineralization solution (pH=4.35-4.65) respectively with duration of 60/72/84/96/108 hours. Surface microhardness (SMH) was assessed with Vickers microhardness tester using a pyramid diamond tip exerting 100 g load for 15 s. Lesion depths of three specimens out of each group were evaluated from five different demineralized pit under a stereomicroscope. Data were analyzed by two-way ANOVA and post hoc Tukey HSD tests.

Results: After acid exposure SH values significantly decreased in all groups ($p=0,001$; $p<0.01$). The highest SH values were observed in group 1 – 60 hour (mean: $261,64 \pm 51,4$). Statistically significant differences were shown between all groups in terms of Δ hardness ($p<0.05$). After 72 hours of demineralization, the microhardness values were tend to decrease more as the exposure time increases ($p=0,001$; $p<0.01$). The mean lesion depths were varied from $3,45 \pm 0,59 \mu\text{m}$ to $20,74 \pm 2,00 \mu$.

Conclusion: Our findings show that there is positive correlation between duration of demineralization and lesion depth; negative correlation with microhardness. We assume that initial lesions may deepen quickly when patients neglect oral hygiene, especially after 3 days.

Keywords: Microhardness, demineralization time, lesion depth

Evaluation of effective duration of different cleanser tablets providing prosthetic hygiene care on some denture base resins

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Aim: Denture bases behave like antimicrobial agents due to their weak surface interactions with microbial film. However, denture cleaning tablets should be used in addition to cleaning properties of denture base resins. The aim of our study was to evaluate the antimicrobial effects of the denture cleanser tablets using various times against microbial flora on various denture base resins.

Materials-Methods: The surface-roughness of Acron-Hi™, Qc-20™, Meliodent™, and Deflex™ resins was standardized by using a profilometer. The antimicrobial activity of the cleanser tablets (The Polident 3 min™, Sterodent™, and Corega™) against microbial cells (*S. aureus*, *S. mutans*, *S. gordonii*, *E. coli*, *A. actinomycetemcomitans*, and *C. albicans*) on the resins was evaluated by using a MTT protocol. Scanning electron microscopy was used to evaluate the effects of different duration of tablet application.

Results: The SEM results exhibited that there was a significant relationship between time and cleansing tablets in terms of the disposal of biofilms in dentures. According to the MTT assay test results, the tablets significantly inhibited ($p < 0.05$) viability of all microorganisms tested against all denture resins after 4-6 min at 1 tablet/150 mL of distilled water.

Conclusions: The type of cleanser tablet, the type of resins, and duration of tablet application may directly affect the biofilm formations. The cleanser tablets may be recommended for patients who use any type of denture resins provided that they are administered in 1 tablet / 150 mL distilled water for 4-6 minutes.

Keywords: Denture base resin, Denture cleanser tablets, Microbial cells

The Role of Gingival Display on Beauty Perception

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Aim: Face esthetic has been evaluated as one of the most important concern since ancient time. Eyes, nose and oral area could be determined as the major components of faces. A beautiful smile contribute to not only beautiful face esthetic but also attractiveness of the person. Smile line, buccal corridors, dental midline, smile symmetry play an important role in attractive smile as well as gingival display. The aim is this study is to evaluate the role of gummy smile and lip line on attractive and beautiful smile.

Material Methods: A photo of a patients who has an ideal smile was chosen. Then gum display of 1 to 6mm were constructed and 6 new photographs were obtained. Similarly, the upper lip was lowered 1 to 4 mm in order to achieve lower lip line. These 11 photographs were showed to 88 lay person (44 male 44 female) and requested to fill Likert scale. The data were evaluated statistically.

Results: The results showed that women do not like 2mm and over gingival display during smile.

This was 3mm and over among men. Low lip line was evaluated as acceptable for both gender.

Conclusion: As a result of this study, it was observed that the amount of gingival display during smile was an important factor affecting the appreciation of the people.

Keywords: smile esthetics, gingival display, perception

Importance of Correct Diagnosis in Oral Health

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Introduction Clinical differential diagnosis is a conceptual to establish the correct diagnosis. In this report, the patient who was referred with the preliminary diagnosis of idiopathic thrombocytopenic purpura.

Case Reports A 32-year-old female patient was referred to Eskişehir Osmangazi University faculty of dentistry. She had a palpable lesion on the buccal area of her lateral tooth which had a smooth surface of 0.2x0.2 cm. The palpation of the lesion caused the area to become whitish. Case history and clinical examination did not indicate any bleeding problem. Blood analysis results and thrombocyte levels were normal and we were not able to distinguish thrombocytopenic purpura from preliminary diagnosis. A piece of membrans tissue was excised 0.4x0.2x0.2cm under infiltration anesthesia and gingivoplasty was performed. Pathologic examination indicated chronic inflammatory cell infiltration and occasionally increased neutrophilia and vascularity in the stroma, resembling normal inflammation in periodontal tissues.

Conclusions To conclude a correct preliminary diagnosis for the patients with idiopathic thrombocytopenic purpura obtaining a blood count and a good anamnesis must be an essential point. Thrombocytopenic purpura is a hematologic disease characterized by decreased peripheral blood platelets. Oral lesions are usually reddish lesions, ecchymoses or even hematomas in the appearance of buccal mucosa and palate petechiae. Spontaneous gingival bleeding is an another early manifestation. In our case the critical clinical analyzes and lab test results made us free to exclude purpura possibility and we removed the lesion.

Keywords: idiopathic thrombocytopenic purpura, oral pathology, blood analysis

A New Treatment Approach in Agenesis Cases: CAD/CAM System

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Introduction: The aim of this study is describe the treatment of primary molars with a deep carious lesion by root treatment and placement of a hybrid ceramic endocrown. Hypodontia is more common in the permanent than primary dentition. The most frequent missing teeth are the third molar, the second premolar and the upper lateral incisor respectively. The prevalence of the congenital absence of lower second premolar is between 2,4-4,3%. After oral hygiene is provided in the treatment planning, ideal occlusion should be obtained and aesthetic problems should be solved.

Case Report: A five-year-old female patient with profound caries in tooth number 75 and a nine-year-old male patient with profound caries in tooth number 85 referred to Istanbul University Faculty of Dentistry, Department of Pediatric Dentistry. Clinical and radiographic examination revealed that mandibular second premolar teeth were congenitally deficient in both patients. Root canal treatments were performed and then endocrowns were planned with CAD/CAM technology (CEREC system) and material used Cerasmart (GC) for primary second molars. Over the 6-month follow-up, no pulpal or periradicular pathology was observed on the radiographs. When the endocrowns were taken into consideration, the marginal fit was excellent, the anatomical form was protected and no discoloration occurred.

Conclusion: It is crucial to keep primary second molar in absence of permanent second premolar. Endocrown is a suitable treatment option for dental restorations in pediatric dentistry.

Keywords: CAD/CAM, Cerasmart, endocrown, pulpectomy, agenesis

Dental Management of a Child with Dentinogenesis Imperfecta Associated with Osteogenesis Imperfecta: A Case Report

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Introduction: Dentinogenesis imperfecta(DI) is an inheritable disorder of tooth development that occurs during the histodifferentiation stage. DI results in structural defects in dentin formation in the deciduous and permanent teeth. It can be subdivided into three basic forms: Shields types I,II and III. Shields type I occurs with osteogenesis imperfecta(OI). OI, also known as "brittle bone disease", is a genetic disorder that affects the connective tissues. A person with OI experiences recurrent, multiple bone fractures. Abnormalities frequently seen in patients include blue sclera, weak joints, easily bruising, deficient growth, short stature, DI and spinal curvature. This clinical report presents the clinical manifestations and management of a 8-year-old child diagnosed with OI and DI.

Case Report: An eight-year-old boy with osteogenesis imperfecta and dentinogenesis imperfecta presented to the Department of Pediatric Dentistry, Dental School, Marmara University complaining of brown discoloration of his teeth. The treatment plan set up for this patient had the aim of preserving the tooth structures because of their susceptibility to marked wear of the tooth crowns. Dental treatment included the use of composite resin restorative materials and stainless-steel crowns. Fluoride therapy was administered, and oral hygiene instructions were given.

Conclusion: OI is a heritable systemic disorder with DI as its dental counterpart. It is essential for clinicians to be familiar with different medical and oral aspects of OI. Children with OI should be examined as soon as teeth are erupted to prevent loss of tooth structure and seen frequently to restore any new enamel fracture and maintain their oral health.

Keywords: brittle bone disease, dentinogenesis imperfecta, osteogenesis imperfecta

Relationship between obesity and temporomandibular joint dysfunction: epidemiological study

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Aim: The aim of this study was to evaluate the relationship between TMJD and obesity, developed by Fonseca and evaluated according to the questionnaire, and scoring ten questionnaires and investigating whether obesity is a risk factor for TMJD.

Material -Method: The study population consisted of 225 patients (Female: 137 [60.9%] / Male: 88 [39.1%]) who applied to the Department of Oral and Maxillofacial Radiology of Akdeniz University, Body mass index (BMI) of patients were calculated.

The questionnaire developed by Fonseca et al. was used to determine TMJD and score. The data were analyzed using SPSS software (SPSS Inc, Chicago, Illinois, USA), P: <0.05 was considered significant.

Results: Non-TMJD patients were seen in 21.2% of males and 34.1% of females, respectively. The proportion of patients with TMJD was higher in women than in men, but this ratio was not statistically significant (P: 0.06). In patients with BMI 18-24.9, the proportion of non-TMD patients was 28.9% and the proportion of patients without TMD was 15.0% in patients with BMI 30-34.9. When the patients with BMI <30 (Group 1, n = 201) and those over 30 years (Group 2, n = 24) were evaluated, the rate of patients without TMED was 29.3% in Group 1 and 12.5% in Group II (P: 0.03).

Conclusions: Obesity may be a risk factor for TMJD. With increased BMI, the incidence of TMJD is increasing.

Keywords: obesity, temporomandibular joint, fonseca questionnaire

Drug-induced gingival overgrowth associated with the use of a calcium channel blocker (amlodipine): 6 months follow-up case report

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Introduction: Calcium channel blocker drugs used in patients with hypertension may cause gingival overgrowth. In this case report, a 68-year-old male patient with gingival enlargement due to the use of calcium channel blocker is presented at 6 months follow-up after periodontal treatment.

CASE REPORTS: A 68-year-old patient with hypertension admitted with the complaint of gingival overgrowth to Yuzuncu Yil University, Faculty of Dentistry, Department of Periodontology. The patient stated that he used calcium channel blocker (amlodipine) for 20 years ago. The patient declared that gingival enlargement complaint was started at 18-19 years ago. After the first examination the patient was consulted to the cardiologist for drug replacement. As a result of the consultation, the patient's medication was replaced with the beta blocker (nebivolol). Scaling and root planing was made under local anesthesia then oral hygiene training was given to the patient. In the distal site of 23, periodontal pathological pocket was found after 21 days of root planning and flap surgery was applied. 26 was extracted and then fixed/removable prosthesis was made. After the periodontal and prosthetic treatments the patient was taken into the supportive therapy. Conclusions: After 6 months of follow-up, gingival enlargement became normal size without the need for gingivoplasty. Treatment of drug-induced gingival overgrowth includes cessation or replacement of the drug and decreasing other risk factors with meticulous mechanical and chemical plaque control.

Keywords: drug-induced gingival overgrowth, hypertension, amlodipine

The evaluation of effect of MTA- Caps and Pro Root MTA on human pulp cell viability

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Aim: The aim of this study was to compare the biocompatibility of newly developed fast setting calcium silicate cement (MTA-Caps) and ProRoot MTA by using human dental pulp cells.

Material-Methods: MTA-Caps and Pro Root MTA were prepared according to manufacturer's instruction under sterile conditions. Biocompatibility was assessed by MTT assay. The treated cells were incubated with MTT assay solution. Absorbance was measured in an enzyme-linked immunosorbent assay (ELISA) reader at 595 nm.

Results: MTA- Caps and Pro Root MTA exhibited similar good biocompatibility. Dilutions were affected the biocompatibility of two materials.

Conclusion: Within the limitation of this study, MTA- Caps has not got negative effect on human pulp cells. This study was supported by University of Gazi University

Keywords: Biocompatibility, MTA Caps, pulp capping

Effects of Diode Laser Irradiation on Dental Pulp in Rats

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Aim: To evaluate the effects of different power densities of diode laser on dental pulps in rats.

Materials-Methods: In this study used the maxillary central incisors (n=80 teeth) of the 20 adult male Wistar albino rats. Rats were randomly divided into four groups according to power densities of diode laser (n=10 teeth). Group 1 (G1): No treatment (control), G2: irradiated with 15 J/cm² (0.3 W), G3: irradiated with 30 J/cm² (2 W), and G4: irradiated with 60 J/cm² (4 W). The animals were euthanized on 7th days after laser treatment, and all maxillary central incisors were extracted surgically. Then the teeth were submitted to histology. The sections stained with hematoxylin and eosin. Histopathological changes in pulp and height of odontoblast layer were examined histological. All data were compared statistically using Mann - Whitney U test, P<0.05.

Results: The pulps of the G1 showed normal histological structure. The pulps of the G2 displayed slight histopathologic alterations such as odontoblast cell disorganization and irregularities in cell extensions. Alterations were more prominent in the G3 than G2. The lowest odontoblast layer was measured in the G4, the difference in height of odontoblast layer among the groups was not found to be statistically significant (P>0.05).

Conclusion: As long as used in accordance with the recommended procedure, the diode laser can be safely use in dental hard tissues.

Keywords: Dental pulp, diode laser, rat

Cone-Beam Computed Tomography Exploration and Treatment of Impacted Mesiodens

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Introduction: Mesiodens is a term for supernumerary teeth present in the premaxilla between the two central incisors. They can occur in both maxilla and mandibula.

Case Reports: A 10 years old male patient referred to the Pediatric Dentistry Department of Gaziosmanpasa Dentistry Faculty with a chief complaint of " delayed upper anterior tooth ". The patient had no another dental problems. The patient presented with no relevant medical history. Intraoral examination revealed the space instead of 11 number tooth. Intraoral periapical radiography and orthopantogram revealed one immature crown with adjacent impacted 11 number tooth in eruption path. CBCT exam of the maxilla to assist in localization and orientation of the mesiodens. Axial sections images revealed horizontal impaction of 11 tooth number, and cross-section oblique images revealed impacted permanent maxillary central incisors, as well as the relationship with the adjacent teeth and structures. The surgical technique was performed under local anesthesia.

Conclusions: Early diagnosis of mezidens is important to prevent complications.

Keywords: Cone-beam computed tomography, delay eruption, mesiodens

Perhaps, there is a last chance before extraction

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Introduction: Between adolescents the most common dental problem is dental pain which is caused by tooth decay. For treatment of this problem; the painful tooth can be treated in a wide range from filling to extraction. Nevertheless we encounter teeth that can't be restored frequently. In such cases the most appropriate solution for adult patients is tooth extraction afterwards recomplete the dentition as making a suitable dental prothesis. Encountering this situation at adolescent individuals who are undergoing growth development is a challenge. After tooth extraction space maintaining is critical for making an ideal prosthetic treatment in the future. But growth development has to halt in order to rehabilitation. Classical treatment plan is making a space maintainer and waiting at this cases. Even so this solution can't be prevented alveolar bone resorption which is a handicap for placing implants.

Case Reports: Two adolescents patient who were 12 and 13 years-old were referred to our clinic with the complaint of dental pain. These patients had non-restorable molar teeth. We decided to extract these teeth roots which was below of gingival margin by hemisection procedure. After gingival contouring, we were performed root-canal treatment and placed fiber reinforced post. After preparation of these weak structures, were fixed porcelain crowns.

Conclusions: We aim that a tooth supporter, a restored dentition, a space maintainer and decreased bone resorption by performing this kind of treatment strategy. We have been following these patients for nine month. But we believe that have to be followed up for more period.

Keywords: hemisection, space maintainer, adolescent

Treatment of tooth discoloration after endodontic treatment: 6-month follow-up

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Introduction: Discolorations which occur on teeth for various reasons may lead to aesthetic problems especially in the anterior region. In the treatment of discoloration, bleaching treatment with correct diagnosis can be applied before the invasive methods such as aesthetic crown prosthesis.

Case Report: A 33 year old female patient's right upper lateral tooth was treated 3 years ago with root canal treatment. One year ago, the patient noticed an increasing discoloration and applied to our clinic. As a result of clinical and radiological examinations, it was determined that the tooth was asymptomatic. In order to decrease the discoloration, it was decided to apply bleaching with 'walking bleaching' technique. The composite restoration was completely removed and the pulp cavity was opened. Powdered sodium perborate was prepared by mixing with distilled water and placed in the pulp cavity with moist cotton pellet. The cavity was temporarily closed with a light-curing composite resin (Gradia, Tokyo, Japan). On the fourth day, it was seen that the discoloration was eliminated and tooth color was compatible with others which was sufficient. Clinical and radiological examinations performed 6 month later showed that the tooth was asymptomatic

Conclusion: In discolored teeth; bleaching treatments can be performed with the correct indication before invasive methods such as all ceramic crown, composite, porcelain laminates and porcelain-metal crowns. In this way, both the aesthetic expectations of the patient would be met and the natural tooth structure would be preserved.

Keywords: Devital bleaching, Sodium perborate, Discoloration

Dosimetric Evaluation of the Effect of Dental Restorative Materials in Head and Neck Radiotherapy

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Aim: The aim of our study is to assess the dose enhancement from scattered radiation at amalgam and composite-filled teeth for restoration of occlusal and mesio-occluso-distal (MOD) cavities during simulated head and neck radiotherapy.

Material & Methods: In this study, we have studied the backscatter effect of conventional amalgam, high-copper amalgam, and resin composite dental restorative materials at cadaver mandible teeth with occlusal and MOD cavity fillings during simulated head and neck radiotherapy using three therapeutic photon energies of 1.25 MeV, 6 MV, and 18 MV to assess the dose enhancement from scattered radiation that may lead to osteoradionecrosis of the lower jaw.

Results: The results showed that backscatter regarding irradiation energy was minimum for 18 MV X-rays, With respect to dental restorative filling material, backscatter was minimum for resin composite filling; whereas regarding the cavity type, our results revealed that backscatter was slightly but not significantly different for all Co 60 (1.25 MeV), 6 MV X-ray, and 18 MV X-ray energies for both occlusal and MOD cavities.

Conclusion: Our dosimetric results suggest that resin composite filling may be recommended in the individualized management of head and neck cancer patients requiring dental restorations with its minimal backscatter to avoid radiation-induced toxicity.

Keywords: Amalgam, Radiotherapy, Resin composite, TLD100

Investigation of Mineral Content of Root Canal Dentin After the Application of Various Antibiotic Paste Using Energy-Dispersive X-Ray Detector

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Aim: The purpose of this study was to evaluate mineral content of root canal dentin after treatment with different antibiotic pastes including the mixture of metronidazole, ciprofloxacin, doxycycline, cefaclor, amoxicillin or minocycline.

Materials&Methods: Fifty extracted maxillary canine teeth were randomly divided into five groups (n = 10 teeth for each group). Root canals were prepared Reciproc rotary files. Canals were irrigated using 5 ml 5% NaOCl and 1 ml 15% EDTA. Each tooth in all groups were separated longitudinally into two pieces as a control and experimental samples. Each experimental groups received following antibiotic paste; double antibiotic paste (DAP) and triple antibiotic paste (TAP) with doxycycline, TAP with cefaclor, TAP with amoxicillin and TAP with minocycline for 21 days. The Ca, P, Mg, Ca, and K levels and the Ca/P ratio was analyzed by a scanning electron microscope (SEM) equipped with a Bruker energy-dispersive X-Ray (EDX) detector. Data were analyzed with independent samples t-test, one-way ANOVA and Duncan tests.

Results: Ca and Ca/P ratio showed a statistically significant increase TAP with amoxicillin and cefaclor (P < 0.05). DAP, TAP with doxycycline, and minocycline did not change the mineral levels (P > 0.05).

Conclusion: TAP with amoxicillin and TAP with cefaclor increased the Ca level and Ca/P ratio of the root canal dentin.

Keywords: Triple antibiotic paste energy-dispersive spectrometer, mineral level, revascularization

Digitalization of Impression in Dentistry

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Aim:

In this research, it is aimed to compare advantages and disadvantages of the digital impression method and conventional impression methods in recent years.

Material-Methods:

Documents of digital impressions instrument and equipments have been taken out and studies have been made to investigate the characteristics of each system in order to reach technical equipments in the market.

Results:

As a result of the researches, if the digital impression methods are compared to the conventional methods, during the optical scanning, there is cognition of the tooth preparation of undercut, their regularities in the occlusal distance and the entrance path, provide the opportunity to correct the dentist without having to go through a second procedure in the same session. In addition, the increase in marginal compliance of the restoration provides an important clinical advantage. However, even though it is seen as a disadvantage to be able to be affected by hemorrhage, saliva in the mouth and patient compliance during taking the digital impression, the impressions can be made healthily by eliminating these processes. As a result, the shortening of the duration of treatment and the reduction in the likelihood of failure are thought to contribute to the increase in the success of treatment. It also provides an advantage in the objective assessment of student preparation in the field of education.

Conclusions:

Although digital impression is a less error-giving method than the conventional impression, there is a need for further improvement.

Keywords: digital, impression, conventional

The effect of placebo, intracanal diode laser application and low level laser therapy on the change of total amount of CGRP in gingival crevicular fluid: split mouth study design

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Aim: To investigate the effect of a placebo, intracanal diode laser application and low-level laser therapy (LLLT) on the change of the total amount of calcitonin gene-related peptide (CGRP) in the gingival crevicular fluid (GCF) pre- and post-operatively as compared to that of a healthy contralateral tooth (split-mouth study design).

Materials-Methods: According to the inclusion and exclusion criteria, thirty-nine patients were selected. GCF sampling was performed on a contralateral tooth and experimental tooth (root canal-treated tooth). Root canal treatment was performed on the experimental tooth, and the patients were divided into three groups (n = 13), as follows: placebo (mock laser application), intracanal laser application and LLLT. For the post-operative sample collection, GCF sampling was repeated at the same sites (experimental and control teeth) one week after root canal treatment. The total amounts of CGRP levels in the GCF samples were calculated, and the differences among the experimental and control teeth in terms of the total amount of CGRP were analyzed using the two independent sample t-tests (p=0.05).

Results: In the placebo group, the total amount of CGRP changes in the GCF before and after the treatment was significantly higher for the experimental tooth than that for control tooth (p<0.05). However, there were no significant differences between experimental and control tooth in the intracanal laser application and LLLT groups (p>0.05).

Conclusions: Intracanal laser application and low-level laser therapy have immunomodulation effects linked to the modulation of the total amount of CGRP in the GCF.

Keywords: Calcitonin gene-related peptide, diode laser, gingival crevicular fluid, low-level laser therapy, neurogenic inflammation

Treatment of a dental midline deviation with orthodontic mini screw anchorage: case report

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Introduction: The aim of this case report is to present the orthodontic treatment of an adolescent male patient with dental midline deviation with mini screw.

Case Report: A fifteen years old male patient with chief complaint poor dental appearance, crossbite and crowding were evaluated in terms of orthodontics. Orthodontic evaluation revealed that skeletal class I and dental class I relationships, severe crowding, dental midline deviation, anterior crossbite and critical overbite. In treatment plan, it was decided to apply fixed orthodontic treatment with permanent upper and lower first premolar teeth extraction. After upper and lower first premolar teeth were extracted, the fixed orthodontic appliance system that called MBT versatile plus was applied. Mini screws were placed.

The patient was treated successfully. At the ends of treatment, dental class I molar and canine relationship was achieved. Upper and lower anterior teeth were aligned to their proper position and dental midline deviation problem was corrected. During fixed orthodontic treatment all teeth were aligned with maximum anchor mechanics by more retraction of anterior teeth and less mesial movement of posterior teeth. All complaints of the patient have been removed. Satisfying esthetic and functional results were obtained.

Conclusion: Patients with dental midline deviation due to crowding can be treated with fixed orthodontic mechanics. Orthodontic treatment ensures healthier mouth, a more impressive facial appearance and teeth that will stay in mouth for longer.

Keywords: Dental midline, Deviation, Mini screw, Anchorage

The effect of low-level laser therapy on total amount of substance P in gingival crevicular fluid: Placebo controlled randomized clinical trial

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Aim: To investigate the effect of low level laser therapy (LLLT) and placebo on total amount of substance P in gingival crevicular fluid (GCF) pre- and postoperatively.

Materials-Methods: Twenty-six patients having tooth with symptomatic apical periodontitis enrolled in this study. GCF was collected preoperatively. The patients were assigned into two groups (n = 13), as follows: placebo and LLLT. Sampling was repeated 7 days after root canal treatment. Two independent samples T test was used for analysing of the differences between preoperative and postoperative substance P levels in GCF ($p = .05$). The Pearson correlation analysis was used for determination of correlation among substance P levels and other variables.

Results: For placebo group, there is no significant difference between preoperative and postoperative total amount of substance P level ($p = 0.553$). For LLLT group, postoperative total amount of substance P level was significantly higher than those of preoperative level ($p = 0.005$).

Conclusions: Within the limitation of the present study, LLLT has immunomodulation effect linked to the modulation of the total amount of substance P in the gingival crevicular fluid.

Keywords: substance P, low level laser therapy, postoperative pain, gingival crevicular fluid

Use of Negative Apical Pressure Technique for Removal of Extruded Gutta-percha Fragment

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Aim: The aim of this case report was to present using negative apical pressure technique for removal of extruded gutta-percha fragment during retreatment procedures.

Case Report: A 22 year-old female patient was referred to the Department of Endodontics with severe pain, swelling, and tenderness to percussion and palpation in the left maxillary tooth of #14. Periapical radiograph showed previous root canal treatment of tooth #14 with incomplete root canal fillings on both mesial and distal roots. The patient was advised of retreatment. During retreatment procedures a gutta-percha extruded from mesial root canal. The patient was recalled after one day. At the second session, it was observed that the swelling was increased. One of the tips for calcium hydroxide paste application was adjusted to suction of dental unit. Tip was placed into the canal as deep as possible. After a few attempts, extruded gutta-percha was removed and the patient was recalled after one day. At one day from the fragment removal, the swelling was decreased. Calcium hydroxide paste was placed into the canals for one week. At the fourth session, the patient was asymptomatic and the treatment was completed at this session.

Conclusions: Using negative apical pressure technique provides a safe technique for removal of extruded gutta-percha.

Keywords: negative apical pressure, retreatment, gutta-percha

Spectrophotometric analysis of discoloration and intracoronal bleaching after use of different antibiotic pastes

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Aim: To investigate the color change of teeth caused by containing different antibiotics pastes, and bleached with two different techniques.

Material-Methods: Extracted maxillary human incisors are used. Six groups have 20 teeth. One of this groups is controlled group no treatment. Five pastes having different antibiotics (ciprofloxacin, metronidazole, minocycline, cefaclor doxycycline and amoxicillin) are placed to root of the other 5 groups. Spectrophotometric measurements were obtained firstly in the beginning, then on the 1th, 2th and 3th weeks after the placement of the paste. The specimens discolored by antibiotics pastes were then divided into two subgroups. The subgroup 1 called walking bleaching and the subgroup 2 called thermophotobleaching with Nd-YAG laser. Spectrophotometric measurements were obtained, firstly in the beginning, then on the 4th, 8th and 12th days after the placement of the bleaching materials. Data were collected based on the CIELAB-CIE1976 (L*a*b*) system and analyzed using the one-way analysis of variance and post-hoc Tukey's test ($\alpha = 0.05$).

Results: According to the total color differences between 2 colors (ΔE) all groups showed color changes exceeding the perceptibility threshold at all time points except the control group and double antibiotics paste groups ($\Delta E > 3.46$). Triple antibiotics paste with minocycline, induced the most severe coronal discoloration (32.42). When the ΔE is examined thermophotobleaching (22.01 ± 8.23) causes more whitening than walking bleaching (19.73 ± 5.73) at every time ($p < 0.05$).

Conclusion: Except the double antibiotics paste, all antibiotics pastes cause discoloration. Intracoronal bleaching with Nd-YAG laser can be useful for bleaching this discoloration.

Keywords: Antibiotics paste, discoloration, bleaching, Nd-YAG laser, spectrophotometre

The perception of young adults about the influence of tooth loss on their quality of life

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Aim: To assess the perception of young adult patients (YAP) regarding the impact of partial edentation (PE) on their quality of life (QoL).

Material-Methods: Subjects were selected from patients attending a private dental office in Bucharest (Romania) between 2014-2016. Inclusion criteria: age 18 to 35 years, at least one PE. Patients were clinically examined and completed a questionnaire about: I. Socio-demographic data; II. How the presence of PE influenced their QoL (couple life, social interactions, chances of employment). Variables taken into account: gender, place of residency, education level, topography of missing teeth (anterior/posterior). Statistical analysis was performed (t-Student and ANOVA tests, $p < 0.05$).

Results: 256 patients (mean age = 26.17y) were selected: 109(42.6%) male, 147(57.4%) female (NS); 190 patients (74.2%) came from urban areas; 153(59.8%) had high-school education. 511 PE were found: 471(92.17%) posterior, 40(7.83%) anterior. The mean number of PE per patient was 1.99 (male/female: 2.16/1.87; NS). 248(96.9%) patients stated that PE changes their appearance, 226(88.3%) felt impaired mastication, 189(73.8%) stated altered phonation. SS differences were found between genders regarding perception of speech ($p = 0.006$). Missing front teeth had a greater impact on QoL for urban patients ($p < 0.05$). Impact of missing teeth on the chance of employment was correlated with the level of education ($p = 0.001$).

Conclusions: Although most missing teeth were located in the lateral areas, almost all YAP felt their appearance was impaired. Anterior edentations' impact on QoL depends on the place of residency and education level of YAP.

Keywords: young adult, partial edentation, quality of life

Effect of Multi-Walled Carbon Nanotube Incorporation to Glass Ionomer Cements on Surface Roughness and Microhardness: A Pilot Study

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Aim: The aim of this pilot study was to evaluate the surface roughness and microhardness of conventional glass ionomer cements (GIC) and multi-walled carbon nanotube (MWCNT) incorporated GIC for potential improvements in physical effects.

Material&Methods: A total of 28 disc-shaped experimental specimens were fabricated by adding different ratios (Group 1: 1wt%, Group 2: 2wt%, Group 3: 3wt%) of MWCNT into a commercial GIC powder. Conventional GIC specimens were assigned as the control group. After incubating for 24h at 37°C in 100% humidity, surface roughness values of each group were measured under a profilometer and microhardness values of each were recorded using a Vickers hardness tester. Data were analyzed with one-way ANOVA and for the comparison among groups, Tukey multiple comparison test was used ($p < 0.05$).

Results: The mean values of surface roughness between all groups were found statistically significant ($p = 0.016$). Group 3 showed greater roughness than the control group ($p = 0.009$). Surface roughness values of Group 1 and 2 were similar to that of control group ($p > 0.05$). Microhardness records revealed a significant difference between all groups ($p = 0.016$) with the control group had greater hardness values than Group 2 and 3 ($p = 0.047, p = 0.014$). Group 1 revealed greater hardness values than Group 2 and 3 ($p = 0.046, p = 0.025$) with no significant difference from the control group ($p > 0.05$).

Conclusion: Results of this pilot study revealed that incorporation of 1wt% MWCNT have physical properties comparable to conventional GIC. Further *in vitro* studies on the other physical properties of GIC need to be carried out in order to use MWCNTs in dental restorative materials.

Keywords: carbon nanotubes, glass ionomer cements, microhardness, surface roughness

Hygiene applications in implant prostheses

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Introduction: Nowadays, implant treatments are an important alternative treatment for patients in dentistry. The indications for implant treatment, the choice of implant type and the correctness of superstructure planning as well as the optimal hygiene and routine patient follow-up can affect the result success. While implant prostheses are selected as a treatment option, it is not only the application of the implant and the completion of the upper body, but also the patient's hygiene methods should be informed and routine checks should be made after the treatment.

Different methods are used in the hygiene of implant-fixed and removable dentures, new hygiene systems are being developed every day.

Case: In this case report, the follow-up of oral hygiene of the patient rehabilitated with implant-supported overdenture prosthesis is described. The patient's oral hygiene was provided with pressurized water hygiene systems during follow-up.

Conclusions: Pressurized water hygiene systems are a reliable method of ensuring hygiene of implant prostheses in cases who hand manipulation is not sufficient.

Keywords: dental implant, implant prostheses, oral hygiene

The occluso-prosthetic concept in implantology

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Aim: Improved implant surgery procedures and pre-implantation investigations have helped to increase the success rate of dental implants by enhancing osteointegration and stability. We have now entered the era of occluso-integration which ensures the sustainability of our implant restorations but an important question that requires reflection: "Which occlusal concept to choose and for which clinical case? "

Material-Methods: Seven Patients were treated by supra-implant prosthesis, whatever the extent of a rehabilitation and whatever the type; it must necessarily seek an optimization of the occlusal functions since it is the position of The future prosthesis that guides the position of the implant.

Result:

The key to the success of the implant is how the forces are transmitted to the interface between the bone and the implant. Occlusal overloads induce two major complications: fatigue of the metal constituting the implants, the signs are unscrewing, twisting or fracture of the screws, fractures of implants or the overlying prosthesis; And marginal bone loss. These occlusal overloads, harmful both in intensity and direction, are due to two factors: initial errors in the occluso-prosthetic design and the evolution of the occluso-articular system over time. These factors can be broken down into: •Differential mobility between teeth and implants coupled with poor balance of the occlusal contacts in static and dynamic, • Interference, • Poor management of occlusal curves.

Mutual protection and anterior disclusion have come to be considered as acceptable therapeutic modalities

Conclusions:

Vast subject..... but simple rules and commonsense can clarify it.

Keywords: Implantology occlusion, peri-implantitis, occlusal concept

An investigation of shear bond strength on caries affected dentin surface

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Aim: In this study, it was aimed to compare the bond strength of a fiber reinforced composite resin with traditional and bulk-fill composite resins on caries affected dentin surfaces.

Material-Methods: 120 third molar teeth were isolated with an acid resistant nail varnish and stored in a demineralisation solution (pH 4.5). After mechanical removal of the varnish teeth were buried in acrylic resin blocks. For every composite resin group, the specimens were prepared with diamond burs. Then the specimens were divided into three adhesive system (Adper Single Bond 2 (3M ESPE, USA), Clearfil SE Bond (Kuraray Europe GmbH, Germany), Clearfil Tri-S Bond Plus (Kuraray Europe GmbH, Germany)) applications followed by composite resin restorations (Filtek Z250 (3M ESPE, MN, USA), G-aenial Posterior (GC Corporation, Japan), SonicFill 2 (Kerr, USA), Ever X Posterior (GC Europe N.V, Belgium) (n=10). Shear bond strengths were measured using a universal testing device and failure types were determined with stereomicroscope images. SEM images were obtained in x 1000 magnification. Two-way Anova analysis and Bonferroni correction were used relatively for main effects and multiple comparisons (SPSS Statistics 20). $p < 0.05$ was considered as statistically significant.

Results: Adhesive system and composite resin difference affected the bond strength results significantly ($p < 0.05$). EverX Posterior showed the highest bond strength results when used with SE Bond ($24,54 \pm 1,29$).

Conclusions: It was possible to say within the limitations of this study, fiber reinforced composite resin had successful bond strength results.

This work was supported by the Gaziosmanpasa University Scientific Research Projects Commission. (Project No: 2016/42)

Keywords: EverX posterior, caries affected dentin, bond strength

Influence of different light-curing units on monomer elution from bulk fill composites

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Aim: This in vitro study assessed the effect of different light-curing units on the elution of monomers from bulk fill composites with different thicknesses.

Material-Methods: Five bulk fill composites (Filtek Bulk Fill Flowable, SonicFill 2, SDR, Tetric N-Ceram Bulk Fill, and Venus Bulk Fill) and one conventional composite (Filtek Z250) were selected for the study. The cylindrical specimens in thickness of 2 mm or 4 mm were prepared and photopolymerized for 20 s with a light-emitting diode (VALO Cordless) or a halogen (Monitex BlueLuxer) light-curing unit. The specimens in glass vials were covered with a 75% ethanol/water solution and stored in an incubator at 37 °C. Ethanol/water extraction solutions were collected for HPLC analysis after 24 h, 3 days, and 7 days. Bis-GMA, TEGDMA, Bis-EMA, and UDMA were eluted from extraction solutions. The data were analyzed with repeated measures and two-way ANOVA ($\alpha = 0.05$).

Results: The highest amount of residual monomer was detected from the 4 mm thick Tetric N-Ceram Bulk Fill. The light-emitting diode induced lower monomer release from all materials except Tetric N-Ceram Bulk Fill. Significant differences in monomer elution were observed between thicknesses of 2 mm and 4 mm for all composites. SonicFill 2 showed the highest increase in monomer elution with increasing thickness, whereas Venus Bulk Fill showed the lowest increase.

Conclusions: Light-curing unit type, regardless of thickness, may affect monomer release from composites. The amount of residual monomers is highly associated with resin ratio and crosslinking network of the composites.

Keywords: Light curing units, Bulk fill, HPLC, Thickness, Composite resin

Efficacy of diode laser in management of oral Lichen Planus

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Introduction: Oral lichen planus (OLP) is a chronic inflammatory disease with unknown etiology. Numerous drugs have been used with dissimilar results, but treatments are usually symptomatic and without definite cure. Topical and systemic corticosteroids are the most widely accepted treatment option for OLP. But the long term use of corticosteroids has numerous disadvantages like secondary candidiasis and adrenal insufficiency.

The lasers are used as an alternative modality for treatment of OLP with their advantages like non-pharmacologic, non-invasive clinical application with analgesic, antiinflammatory and biositumilating effects.

Case Report: A 60 years-old woman with OLP lesions was treated using diode laser (940 nm) for the symptomatic complaints of burning and pain. The treatment was performed twice a week for 5 weeks and the patient showed complete remission of burning and pain. The follow-up was performed for 12 months and no recurrence was found.

Conclusions: Laser therapy can be used as alternative or additional treatment method without any adverse effects caused by topical or systemic corticosteroids. Diode laser is very effective in providing syptomatic relief of burning and pain in OLP patients.

Keywords: Diode laser, Oral Lichen Planus, pain

The stress distribution evaluation of two different post types which used in complicated crown-root fractures with finite element analysis

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Aim: The aim of this study is to evaluate the stress distribution of 2 different post types under the artificial forces that imitate masticator forces by finite element analysis method.

Material-Method: The analyses of 2 different post types were performed with finite element analysis method. Two working groups were created. First group includes glass fiber post and the second group includes carbon fiber post. The post types were placed to the root canals and 100N force was applied with 90 degrees angle from the incisal edge of the teeth. 100N force was expanded to whole structures of the teeth. Finite element stress analysis method was used in order to evaluate the stress and to obtain three-dimensional model. Analyses were done with ANSYS program.

Results: In the study, glass fiber post was $5.1049e5-7.0225e7$ under the artificial forces, while carbon fiber post was $5.1107e5-6.9851e7$. The stresses were concentrated mostly at the palatal regions of both teeth.

Conclusion: The resistance of glass fiber post against the forces was higher than carbon fiber post. In fractured anterior teeth, glass fiber post system is esthetical than carbon fiber post system.

Keywords: Dental trauma, glass fiber post, carbon fiber post, FEM

Labial Movement of Palatopositioned Anterior Teeth with Fiber Post Systems

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Introduction

Malpositions as palatoversion and palatoposition can be seen eruption to palatin upper teeth during dentition. Malpositions can occur depending on various reasons like congenital factors, the lack of space, early deciduous tooth loss or lateness of permanent teeth and can influence aesthetic, phonetic and psychological states of patient negatively. Orthodontic treatment is the most conservative approach among the treatment options. Some patients are not be persuaded orthodontic treatment because of economic reasons and time requirements. In this situation it is alternatively possible to bring the teeth into position using fiber post systems.

Case Reports

In these case series, the treatments applied to bring the lateral and canine teeth to the proper place in two different patients were discussed. Both patients were not persuaded for orthodontic treatment. Endodontic and prosthetic plans were made to recuse the teeth from the extraction. After the endodontic treatment, the teeth were treated with fiber post systems and crowns were partially removed in labial position and treatments were finished. In this way the teeth were brought close to the proper position.

Conclusions

Orthodontic treatments must be first option in malposition situations. If patients reject orthodontic treatment, they can be treated using fiber post systems without costly situations as implant and prosthetic treatments or tooth extraction in malposition anomalies.

Keywords: tooth malposition, rehabilitation of palatoposition, fiber posts

Regional Tooth Agenesis Associated With Syndactyly-Clinodactyly and Tongue Anomaly:A Case Report

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Introduction

Regional tooth agenesis is one of the rare anomalies which could be seen with syndromes. This case report aimed to present and discuss the patient with inseparable tongue from the right side of mouth floor, syndactyly of hands and feet, agenesis of primary and permanent teeth in a segment of the mandible.

Case report

A 13-year-old male patient referred to our clinic for toothache. The patient had not mental health disorder. Also, it was learned that patient had been operated on his hands and feet and tongue. At physical examination, dysfunction and deformities in hands and feet were observed. Face asymmetry, nasal broadening, color/structure disorder of ears and pigmented areas of neck region were present. He stated that there were also another pigmented areas in his body. At intraoral examination, restricted tongue movement was seen at the right side despite the operation. Intraoral and radiographic examination presented that all permanent teeth and primary teeth except primary second molar tooth were congenitally missing in the right side of mandible. All premolars were double rooted, and taurodontism was observed. The radiographies and cast models of the patient were analyzed and removable acrylic prosthesis was made. However, the patient stated that he could not come to dental appointments because of geographical difficulties. Therefore, genetic studies could not be performed.

Conclusion

Although the patient's dental findings are consistent with regional odontodysplasia, it is also thought to be a rare syndrome from other findings.

Keywords: agenesis, syndactyly, syndrome

Relationship between metabolic disorder and dental anomaly

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Intraduction: An important part of bone mass is consisted in childhood and specifically adolescent period. Extreme acidic beverage consumption and high phosphate consumption of food by disrupting bone mineralization cause osteopenia especially in girls. Alkaline phosphatase elevation may occur for many reasons, such as metabolic bone disorders, liver diseases.

Case Report: A 14-year-old female was referred to the Inonu University's Faculty of Dentistry Department of Pediatric Dentistry Clinic, Malatya, Turkey for a toothache in 2017. The clinical history was learned that she had eating disorder and growth retardation. Decay teeth and at some teeth sensitivity to percussion and palpation revealed that at clinical examination. When panoramic radiograph was taken for diagnosis, it was detected that root anomalies and short roots at roots of many teeth. When patient was consulted child endocrinology department for evaluate, ALP value found high in the hemogram test and osteopenia was detected in the bone structures. The patient's dental caries were treated and the patient was followed up clinically.

Conclusion: Dental anomalies can accompany to metabolic bone disorders and dentists should be careful in this regard.

Keywords: Dental anomaly, metabolic disorder, teeth

Prosthetic rehabilitation of a patient with modified overdenture approach

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Introduction: The tooth-supported overdenture is one of the conservative treatment approaches in contemporary dentistry. In this treatment protocol, construction of prosthesis is performed by taking support from the patient's existing natural teeth. Thus, the proprioceptive mechanism of the patient continues to work. Moreover, existing teeth contribute to retention and stabilization of the prosthesis to be produced. The stresses can be transmitted to the alveolar bone through the periodontal ligaments of the existing teeth. As a result, patient gets the satisfaction of having own natural teeth in the mouth.

Case Report: A 67-year-old healthy male patient applied to the Near East University, Faculty of Dentistry, Department of Prosthodontics suffering from multiple tooth decrements. During both radiographic and intraoral evaluation, a significant decrease in the heights of clinical crowns of the existing teeth (#11, #12, #21-23) was seen. No lesions were detected at #26. Root-canal treatment has been applied to all of the anterior teeth. At this point, the core parts of the individual cast posts were designed as ball-headed precision attachments for the abutments between #12 and #22. After the framework of the removable partial prosthesis was produced, the vertical dimension was determined, and the prosthetic procedures were terminated.

Conclusions: In terms of retention and stabilization of the patient, a more successful prosthetic treatment was applied compared to conventional removable partial prosthesis. In addition, a conservative treatment has been performed using the patient's own teeth. In this case, the resorption of the existing bone was avoided.

Keywords: overdenture, precision attachment, proprioception

Conservative Approaches To Erosive Abrasion That Occur After Pregnancy

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Introduction: Dental erosion is a loss of material in the hard tissues of teeth without caries. It is defined as a progressive and non-reversible process. In this case report; restorative treatment is presented of the patient, who has maxillary and mandibular teeth with the enamel loss on the cervical region after pregnancy.

Case Report: 30 year old female patient referred to our clinic for aesthetic problems, sensitivity and the prevention of teeth erosion. The patient has been made a total of 5 times office bleaching with an interval of 2-3 years in her anamnesis and stated that after the pregnancy, her teeth erosion increased. As a result of intraoral examination of the patient, direct composite restoration procedure was decided to be applied on the teeth cervical region erosion. Defected areas on enamel were roughen with fine grained diamond burs 35% orthophosphoric-acid was applied to roughen the teeth surfaces. After rinse and dry, the bond (Singlebond™,3M ESPE, ABD) was applied and polymerized by LED light. A2 dentin and A2 enamel nanocomposite were used in the restoration of teeth by layering technique (Filtek™ Ultimate,3M-ESPE). Finishing and polishing were made at last stage (Sof-Lex,3M-ESPE).

Conclusion: Excessive bleaching, which is a result of aesthetic expectations at a young age, can lead to bad results after pregnancy in female patients. In early treatment of erosion, risk factors should be determined very well and preventive measures should be taken. The application of composite resin material is aesthetically pleasing, conservative and a treatment option that prevents sensitivity problem.

Keywords: Dental Asthetic, Dental Office Bleaching, Erosive Abrasion

In the patients with type 2 diabetes mellitus, relationship between unstimulated salivary flow rate, dmf index and glycemc control

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Aim: Type 2 Diabetes Mellitus (T2DM) is associated with many oral and dental problems. It is known that the incidence of caries increases in patients with T2DM. The purpose of this study is to evaluate the relationship between caries (DMF) index, unstimulated salivary flow rate and blood sugar regulation in T2DM patients.

Material and Methods A total of 120 individuals (T2DM (+) 60 patients and T2DM (-) 60 control group) were included in the study. The unstimulated salivary flow rate and patients' caries index (DMFI) were evaluated. Patients with T2DM were assigned to the groups with good glycemc control (HbA1C<7 gr/dL)(30 patients) and poor glycemc control (HbA1C>7 gr/dL)(30 patients). Statistical Analysis was performed using SPSS.

Results: There was no difference between the groups in terms of age and gender distribution. In patients with T2DM, the salivary flow rate was 0.18 ml / min and the control group 0.29 ml / min was statistically significant (P =0.03). The unstimulated salivary flow rate was 0.21 ml / min in patients with good glycemc control and 0.15 ml / min in patients with poor glycemc control The mean DMF index was 13.4±2.3 in patients with T2DM and 8.2 ± 1.6 in control group (P =0.01). DMF index was 9.1±1.7 in the patient with T2DM good glycemc control and 15.6±4.1 in the poor glycemc control group (P =0.04).

Conclusion: In patients with T2DM, the salivary flow rate is low and the DMF index is high. Good glycemc control can prevent tooth decay and loss.

Keywords: Diabetes mellitus, salivary flow rate, dmf index, glycemc control

3-Dimensional Evaluation of The Effects of Palatal Crib Appliance on Facial Structures of A Patient with Anterior Open Bite Malocclusion: A Case Report

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Introduction: In this case report, it was aimed to show the results of spontaneous improvement on anterior open bite malocclusion after prevention of bad habits such as thumb sucking and tongue thrust with fixed palatal crib appliance by 3-dimensional photographs.

Case reports: A 9 year-old male patient who have anterior open bite and habits as tongue thrust and thumb sucking, referred to clinic for orthodontic treatment. Application of a fixed habit breaker was planned for elimination of thumb sucking and tongue thrust. A palatal crib appliance was produced from 0.9-mm stainless steel wire, adjusted to the molar bands and cemented onto maxillary first molar teeth. Profile and front view photographs of patient were taken with the 3dMD camera just before application of palatal crib (T0) and after the removal of device (T1). Nasolabial angle, mentolabial angle and also length of upper and lower lip, the distances of True vertical line (TVL)-soft tissue B point (SB), TVL-lip superior (Ls), TVL-lip inferior (Li) and TVL-soft tissue pogonion (SPog), were measured. Overjet (T0:5.5 mm) and overbite (T0: -4.5 mm) were evaluated clinically. At the end of 6 months bad habits were eliminated. Overjet and overbite changed to 2.5 mm and 4.5 mm respectively. TVL-SB and TVL-SPog were decreased while TVL-Ls and TVL-Li were increased. Upper and lower lip lengthened 0.8 mm and 1.36 mm respectively and also retracted according to TVL.

Conclusions: Palatal crib appliance is an effective treatment option for eliminating bad habits and treating anterior open bite malocclusion successfully.

Keywords: Palatal crib, thumb sucking, 3d photography

Prevention of Tmj disorders

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Introduction: The dysfunction of the manducatory appareil is a frequent clinical entity (half of the population would be affected but only 10% of the subjects would consult for pain or joint sounds) and with polymorphic expression which preferentially affects young female subjects at 40 years old. The patient lives very badly and with anxiety this pathology

Case reports: It is a clinical public health study that treat patients with temporomandibular problems and to prevent them in the future. A different multi disciplinary therapeutics were done (A correct restorative obturations;fixed and removable prosthesis,occlusodontics,orthodontics) prevention starts with commonsense advice: do not crack in apples, do not yawn, do not eat big sandwich;do not chew chewing gum...

Conclusion: The prevention and management of joint problems (pain, cracking, slamming) is not so simple since etiology is multifactoriel therefore it was possible to render a big service to patients consulting making their daily lives better.

Keywords: Tmj disorders, Prevention, occlusal equilibration

Consequences of edentulous archs

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Aim: The first teeth extracted are the first molars, unfortunately these are not systematically replaced and the edentulous patient will be victim during all its existence of health problems. It is time to understand the damages and consequences of uncompensated edentulous at the local level: occlusal, periodontal, articular, aesthetic and phonetic as well as at the general level: somatic, digestive, psychological, postural... etc.

Material-Methods: It's clinical study realized at Frantz Fanon hospital of Blida with collaboration of our colleagues endocrinologists; Cardiologists; Osteopaths; Psychologists in order to restore together the balance of the disturbed human body following their uncompensated edentation

Result: All our patients, children and adults, had aesthetic, phonetic and, above all, functional problems: dental migrations, occlusal disorder associated with deficient chewing following uncompensated edentation and complicated with disc articular problems, strong resorption of alveolar archs and loss of vertical dimension in total toothless patients without appliances. Their oral health problems affect their psyche but also their general health by gastric and postural and somatic consequences.

Conclusion: The human body is a unique entity and prevention dentistry is fundamental in oral and also to keep a general health.

Keywords: Result of loss of teeth, oral health, general health

Disc displacements of TMJ: diagnostic approach by exploring axiographic records

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Introduction: The disc displacements (DD) of the TMJ are frequent disorders and they are the consequence of anatomical and functional alterations between the mandibular condyle and the articular disc. Indeed when a patient presents signs and symptoms of temporomandibular disorders which are of multifactorial etiology and with multiple aspects, the diagnosis and the management of these dysfunctions are far from being easy.

Case reports: It is a clinical study that gathers 12 patients with temporomandibular dysfunction in the hospital of Blida. The clinical examination must be rigorous and follow a logical path and the diagnosis will be facilitated through the exploration of articular dynamics using the axiograph (Quick axis of the firm Fag). The axiographic registrations were compared to RMI radiography as secondary examen study models were realized and transferred to a semi adaptable articulator type SAM II for a possible occlusal analysis and thereafter a splint therapy and prosthetic restorations of the full archs; notice that the condylar slope of the articulator has been effectively adjusted with real parameters. After three and six months patients were reviewed to evaluate the effectiveness and durability of the therapy adopted

Conclusion: The axiographic records allow us to positively diagnose the joint problem in the same clinical session with the clinical examination, its evaluation after a period of control confirms our therapeutic attitude towards the clinical case; its use is of great help since the treatment plan differs according to the given diagnosis

Keywords: Axiography, Tmj disorders, diagnostic, articular disc

Instrumentation time of primary root canal shaping with manuel, rotary and reciproc systems: K file, Protaper, Twisted File, Resiproc, and OneShape

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Aim: The aim of this study was to compare instrumentation time of K file, Protaper, Twisted File, Resiproc and OneShape systems in the preparation of primary molar root canals.

Material-Methods: Seventy-five primary mandibular molar human teeth were randomly divided to five groups (n:15 teeth for each group). The distal canals of teeth were shaped with each of the following instrumentation system: K file (manuel instrumentatin), Protaper, Twisted File, Resiproc and OneShape. Root canal instrumentation time was measured with chronometer. Data were statistically analysed using ANOVA and Tamhane test with a level of significance at $p<0.05$

Results: There was statistically significant difference between the groups ($p<0.05$). Reciproc and OneShape groups had significantly lesser instrumentation time when compared to the other groups ($p<0.001$). There was no statistically significant difference between Resiproc and OneShape groups ($p=0.85$)

Conclusion: Reciproc and OneShape systems had lesser instrumentation time. With in the limits of this study, these systems were preferable for primary root canal treatment.

Keywords: Instrumentation time, K file, Protaper, Resiproc, OneShape

Placement of the dental implants to mandibular lateral or canine regions: a three dimensional finite element analysis

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Aim: Implant-retained overdentures is a common technique nowadays. During implant operation, these implants are usually planned in accordance with the dental arc. In addition, the region where the implant is applied affects the force coming from the implant and it is important for the prognosis of the implant. In this study, the implants were placed in the mandibular lateral or canine regions and the stress distributions in the implants evaluated using three-dimensional finite element analysis.

Materials-Methods: Four different variations were modeled to represent differences in implant location (mandibular lateral or canine regions). Two different loading forces were applied on middle line (60 N) and posterior line (100 N). The Von-Mises stresses under vertical load were compared to each implant by finite element analysis (FEA).

Results: At mandibular lateral region, the maximum Von Mises stress was 2.7 MPa and 9.0 MPa, respectively under load 60N and 100N. At mandibular canine region, the maximum Von Mises stress was 2.2 MPa and 7.3 MPa, respectively under load 60 N and 100 N.

Conclusion: Higher stress values were found in the implants placed in the mandibular lateral region than in the mandibular canine region for both loading simulations. This study is helpful in choosing the right placement of implants in the atrophic mandible.

Keywords: Dental implant, 3D finite elements analysis, stress distribution

Investigation of physical properties of three different glass ionomer cements: an in vitro study

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Aim:

The aim of this in vitro study is to compare the surface roughness and compressive strength of three different glass ionomer cements.

Materials-Method:

Conventional (Fuji IX GP), zinc reinforced (ChemFil Rock) and glass hybrid reinforced (EQUIA Forte) glass ionomer cements were used in this study. To compare the physical properties of glass ionomer cements, metal cylindrical molds with dimensions of 10 mm x 2 mm were used for surface roughness test, 4 mm x 6 mm were used for the compressive strength test and 10 samples were prepared for each group. Samples incubated in distilled water for 24 hours, then they were measured from five different points on a single line using a roughness device and average surface roughness values were obtained by averaging the obtained values. After 168 hours the surface roughness measurement was repeated. A universal test device was used to measure the compressive strength.

Result:

No statistically significant difference was found between glass ionomer cement groups in surface roughness measurements taken after 24 hours and 168 hours. However, there were statistically significant differences between time (24 hours vs. 168 hours) in each group. When the values are evaluated in terms of compressive strength; "Fuji IX GP= EQUIA Forte > ChemFil Rock".

Conclusion:

This study showed that surface roughness of glass ionomer cements increase with time and, compression strength of Fuji IX GP and EQUIA Forte are more higher than ChemFil Rock. This study supported by a grant Gaziantep University Research Foundation "Number: DHF.DT.17.03"

Keywords: Roughness, glass ionomer, compressive strength

Prosthetic Treatment Of Avulsed Anterior Teeth Owing To Trauma

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Introduction: The prognosis of an avulsed tooth and the resulting malocclusion in trauma cases should be assessed clinically and radiographically very well. Prosthetic treatment options are assessed in the situations where avulsed tooth is not available^{1,2}.

Case Report: An 11-year-old boy was admitted to Karadeniz Technical University Faculty of Dentistry Pedodontics Department with the complaints of avulsion and soft tissue injuries in four maxillary anterior teeth owing to the trauma caused by hitting a swing. It was found that there was no avulsion teeth, the systematic disease and the allergic problem in the patient 's medical history and the trauma occurred the day before. In the intra oral examination, blood clots in the avulsed teeth sockets, and injuries and edema in the anterior buccal mucosa were detected. Panoramic radiographs showed no pathological findings in the roots of the teeth adjacent to the alveolar bone fracture and trauma. The alveolar plugs were washed with saline and the blood clots were cleaned. The soft tissue dressing was performed to the patient and antibiotics and oral mouthwash were prescribed. Regular dressing sessions showed improvements in the gingiva and buccal mucosa. The aesthetic and phonetic needs of the growing and developing patient were provided with the classic removable prosthesis made in the maxilla. The patient provided oral hygiene motivation is under follow-up and control.

Conclusion: Removable prostheses that meet the deficit of the avulsed anterior teeth may be useful to provide aesthetic and functional gains until permanent restorative treatment is made.

Keywords: Trauma, Avulsed teeth, Aesthetic restoration

Rehabilitation of complicated post-traumatic crown fractures of anterior teeth with a new post system

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Introduction: Post-traumatic fracture of the anterior teeth and soft tissue damage are frequently observed incidents in kids and complicated crown fractures are highly probable in patients on period of permanent dentition. Functional, phonetical and aesthetical needs of the patients must be needed in these situations. In order to avoid negative psychological effects and maintain patients healthy growth, endodontic treatment and post core restorations might be necessary by using root canals to support restorations.

Case Reports: In these cases, endodontic treatments of complicated crown fracture of anterior teeth were completed and then post-core restorations were made with newly developed self-made core glass fiber post system. Fiber posts mechanically adapted to the root and coronal regions and the fiber posts bonded with self-adhesive resin cement. The self-made core parts were completed with composite resin filling materials in appropriate color.

Conclusions: Glass fiber post systems have been successfully using by clinicians in complicated crown fractures. Fibersite post system have some advantages for dentists such as having self-made core; forming ferrule effect easily; minimum fracture risk due to elastic modulus close to dentin. For these reasons, Fibersite glass fiber post system can be used complicated crown fracture and function, phonetic, aesthetic and psychological problems of patients can rehabilitate safely.

Keywords: complicated crown fracture, dental trauma, fibersite post system

Analyzing Traumatic Dental Injury on Children in Tokat Region

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Aim: The aim is analyzing prevalence of teeth in primary dentition and permanent dentition affected by dental trauma, affected tissues, prevalence of age, gender and treatment methods, in Tokat region.

Material-Methods: The research was put into practice on 0-14 years old children applied to Pediatric Dentistry Department of Gaziosmanpasa Dentistry Faculty, between January 2016 and April 2017. Frequency and percentage values were used on the results.

Results: 181 of 6830 patients applied to our clinic by the reason of dental and peripheral tissues injury (%2,6). Traumatic dental injury frequencies were seen more in boys both in primary dentition (%61,9) and in permanent dentition (%64,7). In order of maxillary central incisor teeth (%81,7), maxillary lateral incisor teeth (%9,9), mandibular central (%4,9) and mandibular lateral teeth (%1,6) were affected mostly in traumatic dental injury both in primary dentition and secondary dentition. While enamel (57%) and enamel-dentin-pulp (%43) were mainly affected tissues in primary dentition, enamel-dentin (%31,6) and enamel-dentin-pulp (%48,2) were affected tissues in permanent dentition. Follow-up or filming is preferred for primary dentition, while composite restoration and endodontic treatments is used for permanent teeth.

Conclusions: As a result, traumatic dental injury is seen more often in pre-school term and school term children. In order to reduce advanced endodontic treatment need, the rate of posttraumatic applications should increase.

Keywords: dental, dentition, prevalence, trauma

Surgical Repositioning After Traumatic Intrusive Luxation of Maxillary Permanent Teeth: Three Case Reports

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Aim: Intrusive luxation is a kind of traumatic injury characterized by an axial displacement of the tooth toward the alveolar bone. Treatment strategies include waiting for the tooth to return to its position, surgical repositioning, and repositioning by orthodontic devices. Report a case of severe traumatic intrusion of a permanent maxillary central incisor of three patients, showing the repositioning surgery performed and the clinical cases.

Case Report: Three patients (two girl, one boy) were referred to the Faculty of Dentistry, Ordu University (Ordu, Turkey) reporting a fall after accidentally. Medical history were taken, noting that patients had no health abnormalities. Clinical and radiographic examination presented that the teeth were to be surgically removed. In all three patients, the teeth were replaced with a forceps. A semi-rigid contention was applied to keep the teeth in its place. After seven days endodontic treatment was started. Endodontic treatments were performed, irrigating the root canal with sodium hypochlorite and a final irrigation with saline solution. After the splints were removed, the root canals were filled. After the fillings were concluded, the teeth were restored with resin. The patients were instructed to return for clinical and radiographic control oen in six month.

Results: The treatment performed was effective and prognosis is favorable. Regardless of the treatment strategy traumatically intruded teeth should undergo periodical clinical and radiographic surveillance on a long-term basis to allow early detection of possible complications.

Keywords: dental trauma, intrusive luxation, surgical repositioning

Delayed Replantation of a Closed Apex Permanent Tooth: A Case Report

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Introduction: Dental avulsion is a type of dental trauma which is very common in children and early intervention is the corner stone of dental trauma resulting permanent tooth avulsion.

Case Report: 8 years old (f) patient consulted to the Inonu University Faculty of Dentistry- Department of Pediatric Dentistry with avulsed permanent tooth (21) and buccal tissue laceration story due to bike accident after 12 hours. The parents had been educated about dental trauma by another dentist. Parents asserted that, they could have catch up with a city dental hospital in 30 minutes, however the dentist have refused to replant the tooth, and after the parents' insistence, the dentist accepted to treat the patient after 2 hours and bonded the tooth to adjacents with composite. After local anesthesia and isolation, the tooth was splinted to adjacent teeth with flexible splint. Amoxycilin antibiotic and chlorhexidin mouthwash were administered and referred to a physician for tetanus booster, the importance of soft brushing and soft food eating were told, root canal treatment was performed after 5 days. At the end of 4 weeks, the splint was removed. After six months of radiographic control the lamina dura was healthy, there was not periapical lesion.

Conclusions: The lack of knowledge about dental trauma of dentists makes it difficult to administer appropriate treatment to the patients. The dentists should be educated intensely about dental trauma treatments.

Keywords: dental trauma, dental avulsion, delayed replantation, dentist education about trauma

Eruption and Restoration of an Impacted Traumatic Tooth Affected By Hypoplasia; A Case Report

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Introduction: Intrusion and avulsion due to trauma in primary dentition, result in defects and eruption disorders on permanent teeth. This study explains (a) the spontaneous eruption led by surgical incision of impacted traumatic tooth (number 22) affected by hypoplasia and (b) oral rehabilitation of a patient whose horizontally impacted tooth (number 21) and odontoma next to it, extracted after orthodontical consolidation.

Case Report: An-eight year old- girl patient applied to Erciyes University faculty of dentistry department of pediatric dentistry. At clinical and radiological examination it is diagnosed that tooth number 21 and 22 were impacted and tooth number 11 and 12 were affected by hypoplasia. At clinical history her parents told that anterior maxilla was hit by swinging chair when she was one year old. This trauma caused avulsion at tooth number 51 and 61. The extraction of tooth number 21 was decided due to impacted horizontally and could not be re-erupted according to panoramic radiography and dental tomography. First of all In order to provide spontaneous eruption of impacted tooth number 22 affected by hypoplasia, we perform an incision on crest and eruption was observed. Then, tooth number 21 and odontoma were extracted.

Conclusion: Approximately one year later, following the eruption of tooth number 22, direct composite restoration was performed and the treatment was completed. The patient is waiting for orthodontic treatment at department of orthodontics in dentistry faculty.

Keywords: Dental trauma, Hypoplasia, Impacted Tooth

Multidisciplinary approach to treatment of traumatic complicated crown fracture: 6-month follow-up

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Introduction: Traumatic dental injuries are more frequent in children, although they occur in all stages of life. Traumatize permanent teeth cause both functional and aesthetic problems in young individuals. In young patients, minimal invasive treatment approach are the most suitable options.

Case Report: A 14-year-old male patient presented with a complicated crown fracture of maxillary central incisors and crown fracture of maxillary lateral incisor as a result of trauma applied to Yüzüncü Yıl University Faculty of Dentistry. Clinical examination revealed that both of the maxillary central incisors (11 and 21) had complicated crown fracture with opened pulp and left lateral incisor (22) had crown fracture. Firstly, the aesthetic restoration of the left lateral incisor was finished and then the root canal treatment of the maxillary central incisors were begun. Calcium hydroxide paste was applied for one week as an intracanal medication. Root filling of clinically maxillary central incisors was performed and coronal restoration was finished with the fiberpost + composite. A digital impression was taken using CEREC BlueCam for a porcelain crown. Clinical and radiological examinations performed 6 month later showed that the tooth was asymptomatic.

Conclusion: Complicated crown fractures are frequently encountered type of dental trauma. With the ideal restorative treatment, the remaining dental tissues must be preserved, aesthetic and functional expectations should be met.

Keywords: Cad/Cam, Dental trauma, Fiber-post

Restorations of Enamel-Dentin Fractures: A Case Report

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Introduction: Trauma to the orofacial region can lead to fracture of the maxillary anterior teeth. Early treatment of these teeth is important for pulp viability. In enamel-dentin fractures, immediate treatment of the tooth after trauma allows to close dentinal tubules and protect the pulp viability.

Case Report: A 10-year-old girl was referred to the Paediatric Dentistry Clinic, Dicle University with trauma. At examination, enamel-dentin fracture was detected at right maxillary central incisor, left maxillary central and lateral incisor and three of the teeth had increased mobility, tendered to touch also had gingival bleeding. Radiographic abnormalities did not found. A flexible splint applied to stabilize teeth for 2 weeks and three of the teeth were covered with glass ionomer cement. After 2 weeks, clinical and radiographic examination was performed to patient. There were periapical lesions at right and left maxillary centrals at radiographic examination. Endodontic treatment was started to both central teeth. The flexible splint was removed. After the calcium therapy endodontic treatment was completed in both maxillary central incisors. All the teeth with crown fractures were restored with composite. The controls of the patient continue with reference to the guideline published by the Dental Traumatology Association in 2012.

Conclusion: Luxation injuries and crown fracture can lead to pulpal necrosis. Even if dentinal tubules obturation is done for crown fracture, pulpal necrosis may occur cause of luxation. The success of the trauma management depends on correct clinical and radiographic examinations, treatment planning and follow up.

Keywords: crown fracture, dental trauma, endodontic treatment, luxation injuries, pulpal necrosis

Treatment of Dental Trauma to Anterior Teeth

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Introduction: Orofacial traumas generally cause dental injuries. Especially the anterior regions of jaws are affected by traumas. The injuries are more frequent in the maxillary jaw than the mandibular jaw. This paper reports management of luxation injuries to maxillary central incisors and uncomplicated and complicated crown fractures to mandibular central and lateral incisors.

Case Reports: A nine-year-old boy was referred to the Paediatric Dentistry Clinic, Dicle University with trauma after three days. Luxation injuries was detected at maxillary right and left central incisors, uncomplicated crown fracture in mandibular left central incisor and maxillary left central incisor, complicated crown fracture in mandibular left lateral incisor, at clinical examination. No abnormalities found at radiographic vision. A flexible splint was applied to stabilize the maxillary incisors for two weeks. Maxillary left central incisor and mandibular left central incisor were covered with glass ionomer liner. Root canal treatment protocols were started for mandibular left lateral incisor. Fifteen days later, the flexible splint was removed; maxillary left central incisor and mandibular left central incisor were treated with aesthetic composite resins. Endodontic treatment was completed in mandibular left lateral incisor and aesthetic composite resin was used for restoration. The controls of the patient continue with reference to the guideline published by the Dental Traumatology Association in 2012.

Conclusions: Crown fractures and luxations are the most commonly occurring of all dental injuries. The clinical and radiographic examinations, treatment planning and follow up are important for the favourable outcome.

Keywords: complicated crown fracture, dental trauma, luxation, uncomplicated crown fracture

Revascularization of immature permanent teeth: 2 case reports

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Introduction

Revascularization of the dentin-pulp complex for necrotic immature teeth is a new approach that involves disinfecting the root canal system followed by tissue repair and regeneration while allowing for continued root development and thickening of the lateral dentinal walls through deposition of new hard tissue.

Case Report

Two 12-year-old patients were referred to the Department of Pediatric Dentistry for dental examination. There was no significant medical history. By questioning their dental history, it was learned that they had injured their anterior teeth approximately three years ago. Intraoral examination revealed an enamel fracture and luxation in the maxillary right lateral tooth (#12) in one of the patients. The other patient had uncomplicated crown fracture and mobility in the maxillary left lateral tooth (#22). Both teeth were tender to percussion. Radiographic examination of the teeth revealed an immature tooth root and open apex, also periapical radiolucency and one of the teeth had internal resorption. In both cases, revascularization treatment were performed. There were no pathology detected in clinical and radiographic examinations at 6-month and 12-month post-operatively. Follow-up examinations are continuing.

Conclusion

Revascularization offers clinicians great potential to avoid the need for traditional apexification with calcium hydroxide or the need to achieve an artificial apical barrier with mineral trioxide aggregate. Furthermore this treatment approach can help rescue infected immature teeth by physiologically strengthening the root walls.

Keywords: open apex, revascularization, trauma

Rehabilitation of anterior missing teeth with a fibre-reinforced adhesive bridge in paediatric patients: a case series

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Introduction: In the early period, tooth loss may occur for congenital reasons, trauma and decay. Different treatment alternatives for aesthetic rehabilitation of tooth loss include removable partial prosthesis, fixed prosthesis, dental implant and partial prosthesis fixed with resin (Maryland bridge). As fibre-reinforced composites (FRC) are materials which do not include any metal, its mechanical and aesthetic properties are extremely good.

Our aim in this study is to rehabilitate with FRC tooth loss in the paediatric patients who are still developing and growing.

Case Reports: In this 5 case series of paediatric patients, it was provided to aesthetic and functional rehabilitation of anterior tooth loss with a fibre-reinforced adhesive bridge applied with a minimally invasive technique which did not require any extra sessions. And it was presented a 1-year-follow up.

Conclusion: Fibre-reinforced adhesive bridge can be considered an inexpensive, conservative, aesthetic treatment alternative which can be applied in a single session for single or multiple missing teeth in the anterior region of young patients who have not yet completed skeletal and dentoalveolar growth and development.

Keywords: Fibre-reinforced composites, missing teeth, Maryland bridge

Management of a complicated crown-root fracture with surgical extrusion: a case report

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Introduction: Dental trauma is more common in young patients and its sequelae may impair the establishment and accomplishment of an adequate treatment plan. According to the severity of the trauma, a large spectrum of complications may occur. If the isolated tooth fracture occurs particularly at anterior region, the rehabilitation should satisfy esthetic, functional and biological problems, as well as the patient's desire.

Case Report: This case, reports a multidisciplinary approach to management of a complicated crown-root fracture on maxillary right central incisor in a 10-year-old boy. Considering the fracture extension, the amount of remaining root portion and the patient's low socioeconomic status it was decided to remove the fractured fragment of the tooth and to extrude the remaining root portion. Under local anesthesia the residual tooth was gently luxated to minimize damage to the marginal alveolar bone and root surface and extruded to the desired position. The alveolar socket was closed using sutures and the residual tooth was semi-rigid splinted for two weeks. After endodontic therapy the tooth was restored with composite restoration.

Conclusions: Clinical and radiographic results after 12 months were successful. This case report demonstrates the importance of establishing a multidisciplinary approach for a successful dental trauma management.

Keywords: dental trauma, surgical extrusion, complicated crown-root fracture

Direct restoration of post-traumatic fractured central incisor using silicone guidance technique: A case report

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Introduction: Various restoration techniques are used such as transparent matrix strips, strip crowns, and free modeling methods for the restoration of anterior teeth fractures with composite materials. Silicone guidance technique is defined as restoration of the tooth shape better, especially the palatal contour, during free modeling. The purpose of this case report is present the restoration of the fractured central incisor tooth with silicone guidance technique using a composite material.

Case Reports: A 10-year-old male patient with no health problems referred to the Department of Pedodontics Faculty of Dentistry of Istanbul University due to trauma. The tooth has uncomplicated crown fracture. There is no pulpal involvement, roots and surrounding tissues were sound, and the lamina dura was solid radiographically. According to vitality tests tooth was vital. Anterior composite restoration was planned for the fractured tooth. A model was created to allow the fractured tooth to be reconstructed by a wax up. After that, another mold with a heavy silicone base was constructed to reproduce the shape and contours of the restorations. The composite material was applied to the tooth after preparation. Finishing, polishing and adjustments were performed with multilaminated drills, abrasive straps and polishing paper disks. The patient recalled at the 1st, 3rd and 6th month after the treatment for clinical and radiographical examinations and there is no discoloration, postoperative sensitivity or marginal staining.

Conclusion: Silicone guidance technique is helpful for good aesthetic result. The natural appearance, color harmony, lingual, proximal and incisal contours and tooth form can be created with silicone guidance technique easily and quickly.

Keywords: Trauma, silicon guidance technique, wax-up

Management of Dens in Dente with Microdontia in Open Apex Tooth with a Chronic Periapical Lesion: A Case Report

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Introduction: Dens in dente the continuation of the enamel fold in the lingual region due to local forces on the tooth bud before calcification of the teeth. It is a rare malformation, showing a wide spectrum of morphological variations such as gemination, microdontia, supernumerary tooth, resulting frequently in early pulp necrosis. Maxillary lateral incisors are the commonest teeth to be affected by this dental malformation.

Case Reports: One year ago, an 11-year-old healthy male patient who referred to Karadeniz Technical University, Department of Pediatric Dentistry clinic, for the purpose of checking was found to have dens in dente in tooth #22 as a result of both intraoral examination and taken periapical x-ray (Fig1,2). The tooth #22 which were begun to root canal treatment at the same session had an apical lesion. After the hard barrier in the apical region had been cleared using long diamond fissure drill, the canal was shaped with the help of gates-glidden drills. Ca(OH)₂ was sent into the canal until the apex was closed. After 6 months the canal was filled using gutta-percha. The patient was followed for 6 months both clinically and radiographically and findings were successful (Fig3,4).

Conclusion: Historically, treatment options were limited to extraction but with the advent of newer elaborate diagnostic tools, endodontic treatment has been a different approach for this anomaly. Dentists have aware of this anomaly because of the risk of apical inflammatory disease. Prophylactic restoration of the development pits of these teeth is important to avoid possible complications.

Keywords: Dens in dente, Root canal treatment, Open apex, Prophylactic restoration

Reimplantation of avulsed mature permanent teeth: A case report

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Introduction:

Avulsion is a traumatic injury, which results in loss of the tooth from the alveolus, while reimplantation is the technique of reinserting an avulsed tooth into the alveolus or tooth socket after its loss. The success of reimplantation depends on many factors among which are the time lapse before the tooth is reimplanted in the socket, the storage medium of the avulsed tooth and stage of root formation.

Case Report:

A 10 year-old-girl was referred to our clinic due to avulsed maxillary right central incisor (11) and lateral incisor (12) one day following the traumatic injury. Tooth #11 was reimplanted and splinted with composite resin by a dentist immediately following the injury and #12 was found approximately 24 hours later by the parents of the patient. In our clinic, root canal treatment was performed to 12 extraorally, it was reimplanted and a semi-rigid splint was applied to both teeth. After one week, initial root canal treatment of 11 was performed. In the four weeks follow-up, splint was removed however tooth #12 had severe mobility. Further treatment plan was determined based on orthodontic needs of the patient and tooth #12 was extracted. The tooth #11 was followed up for 24 months and no clinical or radiographic pathologies were detected.

Conclusion:

The time for reimplantation is critical for the success of avulsion treatments. Also, long-term clinical and radiographic follow-up of patients should be performed.

Keywords: avulsion, reimplantation, traumatic injury

Management Of Internal Root Resorption In Maxillary Lateral Incisor: A Case Report

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Introduction: Internal root resorption is progressive destruction of dental tissues centrally within the root canal. If this clastic activation untreated, it might result loss of the affected teeth. The aim of this case report is to present management of internal root resorption in a maxillary lateral incisor with endodontic prosedure and its outcome.

Case reports: A 15-year-old male patient was referred to our clinic. After the medical histories rewieved, clinical and radiographic examination were performed. The patient reported that he got trauma to his maxillary incisors a few years ago. A periapical lesion and in middle third of the root an internal resorption detected in left maxillary lateral tooth. To confirm the indication different angulation of x-rays were taken. After the access cavity prepared the working length was identified and the root canal was instrumented with Resiproc Rotary System up to R40 under irragation with 1,25% NaOCl. Calcium hydroxide paste was applied and the access cavity was temporarily restored. 2 weeks later, after final irrigation with 5% citric acid under sonic activation, apical third of the root canal was obturated with cold lateral compaction. Resorption defect and coronal third of the root canal were obturated with thermo plasticized injectable gutta-percha technique.

Conclusions: Sufficient filling was provided in radiographic evaluation and the patient had no semptoms after 1 year follow-up. Thermo plasticized enjectable gutta-percha technique can be a suitable alternative for endodontic treatment of these cases.

Keywords: internal resorption, calcium hydroxide, thermoplasticized gutta-percha

Management of Mandibular First Molar with Radix Entomolaris and External Root Resorption

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Introduction: This case report is about the radiographic identification and endodontic management of radix entomolaris and apical external resorption in a mandibular right first molar.

Case Report: In the case of a 11-year-old male patient admitted to our clinic with complaints of severe pain in mandibular first molar tooth which underwent endodontic treatment three years ago. Radix entomolaris and periradicular lesion with external apical resorption were detected on radiographic examination. In the intraoral examination; percussion and palpation were present, mobility and fistula were not observed. Root canals were prepared under rubberdam isolation and filled with MTA.

Conclusion: To make the root canal treatment more successful, clinicians should be aware of variations of the root canal system.

Keywords: endodontics, radix entomolaris, root resorption

Restoration of Upper Anterior Teeth Fractured Due To Trauma: A case report

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Introduction: Traumatic injuries often cause crown fractures in the upper front group of teeth. Individuals may also have aesthetic problems as well as functional disorders. In this case report, the treatment of a female patient, whose upper central was fractured due to trauma, with glass fiber post and direct composite treatment is described.

Case Repors: In the intraoral and radiographic examination of a 16-year-old female patient, who referred to our clinic, it was seen that the crown fracture of the upper central tooth was treated with metal post after the channel treatment. The metal post placed in the upper central tooth's channel was removed and the inside of the tooth channel reshaped with appropriate post burs. 35% orthophosphoric acid was applied to roughen the tooth surfaces after the necessary isolation was achieved in the mouth. After rinse and dry, glass fiber post (D.T. Light-Post Illusion XRO, Bisco) was bonded with self-adhesive cement (G-cem LinkAce) and polymerized by LED light. In the restoration of the teeth, A2 dentin and enamel (Filtek™ Ultimate Universal, 3M-ESPE) nanocomposite was used with the layering technique, after the bond (Singlebond™ Universal, 3M ESPE) was applied and polymerized. Finishing and polishing were done in the last stage (Sof-Lex, 3M-ESPE).

Conclusion: In the cases of broken anterior teeth, glass fiber post and direct composite restorations may be preferred which are more compatible with tooth color and dental tissues compared with metal posts. Patient satisfaction can be ensured both in terms of aesthetics and functionality.

Keywords: Anterior Teeth Fractured, Dental Trauma, Glass Fiber Post

Treatment of Tongue Lesions in Pediatric Patients Receiving Intensive Care

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Introduction: Patients receiving treatment under intensive care units are under life threatening danger which could last for months as the treatment extends. During this period, in association with medical conditions of these patients, oral lesions can develop either as a primary lesion or a traumatic lesion secondary to endotracheal intubations. In this case study, we present the management of a traumatic tongue ulceration of a patient who was under intensive care.

Case Reports: A patient who was receiving treatment under intensive care after a traffic accident was consulted to pediatric dentistry about the lesions on his tongue. The patient suffered from fractures in his legs and neck. Because of an edema on the pons area his spontaneous ventilation had stopped, he was endotracheally intubated. The tongue has become traumatized as it was stuck between the patient's teeth constantly during the rest position. Trials for providing oral hygiene and preventing teeth from impinging on the tongue using sponges were insufficient. Impression was taken with alginate and transparent essix plate was constructed from the obtained cast model. Occlusion was increased 2mm by applying acrylics on the occlusal surface extending from the canine tooth posteriorly. On the 3rd day healing was observed and on the 14th day complete recovery was achieved. Patient condition was followed up to 1 month.

Conclusions: As shown in our case, the oral rehabilitation of patients receiving inpatient treatment with the presence of primary or secondary oral lesions due to trauma can be managed easily by appropriate cooperation between physicians and dentists.

Keywords: intensive care, tongue trauma, essix plate, tongue ulceration

Clinical management of a crown fracture: a case report

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Introduction: Traumatic injuries to teeth usually occur in children and damage may vary from enamel fracture to avulsion, with or without pulpal involvement or bone fracture. The most commonly involved tooth is the maxillary central incisor and in all dental injuries the incidence of complicated crown fractures ranges from 2% to 13%. Different treatment types are available depending on the clinical, physiological and radiographic status of the involved tooth. The aim of this presentations was to observe the management of the complicated crown fractures.

Case Reports: A 10-year-old male patient presented to Istanbul University, Faculty of Dentistry, Department of Pediatric Dentistry. First of all the general medical, dental and traumatic incident histories were reviewed and then clinical and radiographic examinations were conducted. Clinical examination showed a fracture and decay of the crown of the maxillary left central incisor, exposing the necrotic pulp. Periapical radiography revealed an intact periodontal ligament and no root fractures. It was planned to orthodontically extrude the remaining root structure to restore the physiological periodontal attachment. Following canal preparation an apical barrier of MTA was placed. After the root canal treatment root was extruded orthodontically. The fracture tooth was then restored with a post and strip crown.

Conclusions: Especially in children, anterior tooth trauma frequently found in permanent teeth, can cause psychological distress, There are different treatment guidelines and options available for management of complicated crown fractures. During the treatment planning process, the risks and benefits of each treatment option should be carefully analyzed.

Keywords: dental trauma, crown fractures, orthodontic extrusion

Treatment approach in traumatic dental injury: a case report with 1-year follow-up

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Introduction: Tooth and supporting tissue injuries are a common type of traumatic injuries in the populations. Maxillary anterior teeth are the most frequently affected teeth suffered from dental trauma. The most common type of injury in the permanent dentition is the noncomplicated crown fracture that occurs in the maxillary incisor teeth. Usually dental trauma injuries need long term and regular checks that will continue to adulthood from childhood.

Case Report: A 10-year-old male patient with no systemic disease, suffered from dental traumatic injury, was referred to our clinic half an hour after the accident. In clinical examination; soft tissue laceration and 0.5 mm pulp exposition to tooth #11; dental extrusion and lateral luxation to tooth #21; percussion sensitivity to teeth #11 and #21 were detected. Tooth #21 were reimplanted into the socket with finger pressure and semi-rigid splint was applied. Cvek pulpotomi was performed by using MTA on tooth #11. After 2 weeks, splint was removed and the strip crown was applied to the tooth #11. Tooth #21 was found devitalized at the 3rd month of control, and revascularization treatment applied. Patient called for 2nd week; 1st, 3rd, 6th and 12th month for follow-up.

Conclusion: Most of supporting tissue and dental traumatic injuries require emergency treatment. For maximizing the chance of successful outcomes, trauma cases should be checked regularly with appropriate diagnosis and treatment.

Keywords: trauma, anterior teeth, luxation, Cvek

Replantation of 3 avulsed permanent teeth

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Introduction: Avulsion is described as complete displacement of a tooth from the socket and is considered as one of the most severe dental injuries. The ultimate goal in treating an avulsed tooth is to preserve and treat supporting tooth tissues and to replant the avulsed teeth. Extra-oral time period has the most critical effect on the prognosis.

Case Report: An 14-year-old male patient was directed to Istanbul University Faculty of Dentistry Clinics of Pedodontics by a dental clinician after a maxillary trauma. His dental history revealed avulsion injury of his maxillary left central and lateral incisors and canine. The avulsed teeth was replantated in previous clinic after 30 minutes dry-time and fixed with a rigid composite splint. Composite splint was replaced with a flexible splint and root canal treatment was performed on the following week of the trauma. Flexible splint was removed on the second week after stabilizing the mobile teeth. Clinical and radiographic examination was performed on the 4th week, 3rd month, 6th month and 1st year after the initial trauma. At 1 year follow-up, displaced teeth presented no signs of pathology or ankylosis clinically and radiographically.

Conclusion: Avulsion injuries may lead to unfavourable outcomes and premature loss of the tooth, which may negatively impact quality of life. Long-term prognosis of the avulsed tooth can be maintained with a proper treatment and expedient management.

Keywords: avulsion, dental trauma, replantation

Relationship between xerostomia frequency and unstimulated salivary flow rate with interdialytic weight gain in hemodialysis patients

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Aim: The aim of this study was to determine the frequency of xerostomia and unstimulated salivary flow rate and to assess the relationship with inter dialytic weight gain (IDWG) in hemodialysis patients.

Material & Method: This study included 40 patients who received hemodialysis (HD) therapy for 3 hours a week for 4 hours with the cause of End-stage Renal Failure. Patients were divided into two groups according to their interdialytic weight gain (duration between two dialysis sessions), more than 3% dry weight and less weight. There were 20 patients in both groups. Unstimulated salivary flow rate and xerostomia were evaluated prior to the mid-week dialysis sessions. All statistical analyzes were performed using the statistical software SPSS 22.0.

Results: A total of 26 patients (65%) had xerostomia. There was no difference between the two groups in terms of age, gender, duration of dialysis and frequency of diabetes. There was no significant difference in the incidence of xerostomia between the groups ($P = 0.15$). The unstimulated salivary rates were 0.12 ± 0.05 mL / min in the IDWG group and 0.09 ± 0.06 mL / min in the low IDWG group and it was statistically significant ($P = 0.04$).

Conclusion Xerostomia is frequently observed in HD patients and etiology is multifactorial. It is often associated with over hydration and increased IDWG in patients. This is accompanied by increased hypotension and other complications during the dialysis session. Treatment of xerostomia by determining the etiology of the xerostomia can prevent excessive IDWG.

Keywords: xerostomia, unstimulated salivary flow rate, inter dialytic weight gain

Delayed Replantation and Endodontic Treatment of Avulsed Teeth: 18-month follow up

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Introduction: Avulsion is one of the most common traumatic injuries in which the tooth is completely displaced out of its socket. Replantation is the treatment in which the tooth is replaced in its socket. This case report describes delayed replantation of 2 avulsed permanent teeth(22,23).

Case Report: 10 years old boy fell down at the school and avulsed his maxillary left lateral and canin teeth. The time he came to clinic, 20 hours after the accident. Teeth was kept under dry conditions. Necrotic pulp was extracted and Mineral Trioxide Aggregate was used to create apical barrier(23). The root canal treatments were performed extraorally. Replantation of avulsed teeth and replanted teeth were splinted with semi-rigid splint.

Patient was followed up periodically. Canin tooth showed no evidence of resorption and survived until 18 months but The recall radiograph of lateral incisor tooth showed evidence of apical root resorption.

Conclusion: Although complications like ankylosis or root resorption may be unavoidable, delayed replantation of avulsed tooth may be a good alternative to prosthesis till the growth is completed due to preservation of the alveolar bone and psychological benefit to the patient.

Keywords: Avulsion, delayed replantation, dental trauma, replacement resorption

MANAGEMENT OF COMPLICATED CROWN-ROOT FRACTURE: A CASE REPORT

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Aim: Crown-root fractures involving enamel, dentin and cement comprise approximately 2% of all traumatic dental injuries. Management of crown-root fractures requires an interdisciplinary approach along with a comprehensive treatment plan. Treatment options depend on the level of the fracture line, pulpal conditions and whether there is a tooth fragment compatible with the remaining tooth structure. In this case report, the management of a complicated crown-root fracture of maxillary central incisor tooth was presented.

Case report: A 7-year-old girl was referred to the pediatric dentistry clinic. There was complicated crown-root fracture on her maxillary permanent left central incisor due to the scooter accident occurred 10 days before referral. After a thorough clinical and radiological examination, the coronal fragment was extracted under local anesthesia. Cvek amputation with calcium hydroxide was performed and a flap was raised for better vision of the fracture line. The coronal fragment was reattached with composite resin and the flap was sutured. The sutures were removed after 2 weeks. Neither clinical nor radiographical pathology was observed during 30 months.

Conclusion: Long-term clinical and radiographic follow-up in crown-root fractures is important for the proper successful treatment procedure. Fragment reattachment can be considered as an appropriate treatment option.

INTRUSIVE LUXATION OF PRIMARY INCISORS: REPORT OF TWO CASES

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Aim: Intrusive luxation is frequent in the primary dentition. Complications such as pulp necrosis, external root resorption, ankylosis and loss of marginal bone support frequently occur after intrusion injury.

Case reports: In the first case, a 5-year-old boy was referred to the Pediatric Dentistry Department because of the traumatic injury occurred 8 days before referral. Clinical and radiographical examinations revealed intrusive luxation of the maxillary primary left incisors. It was decided to wait for spontaneous reeruption of the teeth and the patient was scheduled for regular appointments. Signs of spontaneous reeruption occurred after 3 weeks. The patient was followed up for three years.

In the second case, a 4-year-old boy was referred to the Pediatric Dentistry Department because of the traumatic injury occurred 5 days before referral. There was an intrusive luxation of the maxillary primary right incisors. The patient was scheduled for regular appointments for observing the spontaneous reeruption of the teeth. At two years follow-up, the teeth had completely erupted and they were in function without any pathology.

Conclusion: Spontaneous reeruption has been an accepted treatment for the intruded primary teeth. Long-term clinical and radiographical follow-up is necessary in order to monitor possible clinical and radiographical pathologies.

Management of the Radicular Cyst Due to Dental Trauma on a Child: A Case Report

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Introduction: Cystic lesions might be seen due to dental trauma and diagnosis is the key point for the treatment procedure.

Case Report: 10 years old child (m), was consulted to Inonu University, Faculty of Dentistry Pediatric Dentistry Department with swelling on his maxillary anterior region because of the maxillary right first incisor (11). It was learned that he had a dental trauma at his 7 years of age, and apexification treatment with calcium hydroxide was initiated after 1 year but they could not follow the appointments. So the lesion could not be healed. Because of the uninterrupted pus drainage and resistance of antibiotic, surgical treatment was decided. After detailed radiological diagnosis, extraction of cystic lesion and apical plug with MTA for the tooth 11, root canal treatment for 12 and 22 were administered, and permanent maxillary right canine was extracted in order to clean all the cystic lesion. Pathological evaluation showed that radicular cyst had effected the other regions of maxilla.

After 1 year radiological and clinical follow-up, maxillary bone was healing, negative respond to percussion and palpation were seen on 12,11 and 21 numbered teeth.

Conclusions: In dental traumatic injuries, when the apexification is made with calcium hydroxide, the cooperation with the patient and the parents is an important detail because of the importance of renewing the material inside the canals. Also determination of surgical treatment of apical lesion has to be made opportunely.

Keywords: Dental trauma, apical resection, radicular cyst

Treatment of a missing permanent anterior tooth with Fiber-reinforced Composite Resin Bridge: A Case Report

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INTRODUCTION: Fiber-reinforced composite (FRC) bridge can offer a good alternative to conventional treatment options in the absence of a single tooth until a more definitive prosthesis can be provided at the end of the growth period.

CASE REPORT: 13 year old female child patient admitted to our department by the reason of the missing maxillary left central incisor. Her dental history indicated a traumatic fall, 4 years back, resulting in the avulsion of her tooth. Four years ago, this tooth had been replaced and root canal treatment had been completed by another pediatric dentist. Unfortunately, external resorption had been obtained in this tooth and a year ago patient had missed her tooth. Intra-oral examination revealed a completely healed socket in relation to the maxillary left permanent central incisor. The patient oral hygiene status was fair. Since the age of patient wasn't suitable for a fixed prosthesis or dental implant usage. FRC bridge was planned in the constricted edentulous region. In order for ruling out the tooth lose with glass fibre, flowable and A2 colored packable composites, were used for bridge application. The functional and esthetic problem of a patient was managed in the same session of appointment with FRC bridge.

CONCLUSION: This case report suggests an interim treatment option for the replacement of missing anterior tooth in young children. This technique does not require any tooth reduction and could be repaired, modified or removed from the abutment teeth without any damage to the sound tooth structure.

Keywords: bridge, composite, fibre-reinforced

Postoperative ecchymosis

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Introduction: The aim of this study is to show the widespread ecchymosis in postoperative period after implant placement. In the postoperative period complications such as infection, pain, swelling, redness, ecchymosis may be seen in dental implant surgery. Postoperative complications are usually short-lived, not too severe and are threatened with the necessary precautions (cold compress application, antibiotherapy-antiinflammatory use, mouthwash use etc.) in the short time.

Ecchymosis is defined as hemorrhagic blotching due to pooling of blood under the skin or mucous membrane caused by medical conditions, hematologic diseases, or trauma. The blood in ecchymosis is metabolized by the body. The ecchymosis may be blue, purple, dark blue, brown, green and yellow, and disappears in about 2 weeks.

Case Report: A 48-year-old female patient applied to our clinic for the treatment of edentulousness. We decided implant placement, after the clinic and radiological examination. The treatment plan of the patient was made with the prosthetic dentistry department. Seven implants were placed in the upper jaw under local anesthesia. When the patient came to control 1 week later, widespread ecchymosis were observed around the eyes, on the cheeks and in the neck region. PT, aPTT, INR tests were requested. The test results were normal. Patient was followed for 1 week recovered completely.

Conclusion: Implant placement is a surgical operation and postoperative ecchymosis may occur after surgery. The size of the complications can be expected to be large, so regular follow-up is necessary for management of complications.

Keywords: implant, ecchymosis, post-op complication

Keywords: implant, ecchymosis, post-op complication

Evaluation of the shade matching abilities of dental students

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Aim: The purpose of this study was to compare shade matching abilities between first grade and fifth grade dental students and evaluate the effect of education.

Material-Methods: This study was performed in Atatürk University, Faculty of Dentistry. Participants performed the Ishihara Color Vision Test before taking part in this study. 30 first grade and 30 fifth grade normal color visioned students (60 students in total) who do not wear eyeglasses or contact lenses were participated in this study. The first grade students had not received any formal dental training in color science or shade matching procedures. All participants were asked to match 20 Noritake shade guide tabs with the corresponding shade guide successively in 10 minutes under midday light. The results were statistically evaluated with t-test and compared between the first and fifth grade students.

Results: Dental students achieved a high identification rate for tabs C4 (71,60%) and D2 (65%). The shade matching scores were 38% and 35.16% for the fifth and first grade students respectively. The difference between first grade and fifth grade dental students' score was not statistically significant ($p \geq 0.05$). The lowest percentages of correct matching were recorded for tabs C3 (6,66%) and A2 (10%) for the first grade and fifth grade students respectively.

Conclusion: This study showed small differences in shade matching success between fifth grade students who had trained in shade matching and first grade students. Although the differences were not significant, education was still associated positively with the outcome.

Keywords: shade guide, shade matching, dental students

Massive residual cyst of maxilla: Case report

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Introduction: Residual cysts are one of the most common destruktif-osseous lesions affecting the jaw. They are usually noticed in the toothless regions of the jaws during routine radiographic examination. They are usually asymptomatic, but it may cause expansion and swelling in jaws. The aim of this presentation is to report a massive residual cyst on maxilla and treatment with enucleation.

Case Report: 56-year-old male patient was admitted to our hospital because of swelling has been in the right maxillary posterior region in about a year. There was a swelling in the right vestibule mucosa and alveolar crest at the examination of the patient and there was a wide and regular unilocular radiolucent lesion on the radiological examination. In aspiration material from the lesion we saw cholesterol crystals. The lesion was surgically enucleated and cyst epithelial was extracted without any intraoperative or postoperative complication. Histopatologic was cyst. Based on clinical and radiographical findings the presented case was diagnosed as a residual cyst. There were no complication and complaint in 3-month follow-up.

CONCLUSION: The differential diagnosis is essential for an effective treatment. Differential diagnosis should include ameloblastoma, odontogenic keratocyst, periapical cementoma and nasolabial cysts. For deciding the treatment method, they are important that the size and location of cyst and anatomic proximity is important.

Keywords: massive cyst, maxilla, residual

Altering vertical dimension of occlusion on patients with class III malocclusion: 2 case reports

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INTRODUCTION

There are significant reductions in occlusal vertical dimension and angular relationships between the upper and lower jaws of patients with Class III malocclusion. Complex treatments are required in these patients who have esthetic, phonetic and chewing function problems all together.

CASE REPORTS

In these case reports, prosthetic rehabilitations of 2 patients with anterior cross-bite and partial edentulism were presented. As the result of the measurements on vertical dimension of occlusion and free-way space of the patients who have maxillary growth restriction, it has been observed that they have inadequate free-way space. It was found that the patients had occlusal contact just in protrusion and the vertical dimensions were decreased in that position. Although orthodontic and orthognatic surgery were offered to the patients, they preferred the prosthetic treatment due to financial situation and time constraints; then it was decided to apply camouflage treatment. Temporomandibular joints of the patients were observed after applying the provisional prostheses, which were produced in the guidance of new occlusal vertical dimensions, and follow-ups were performed for 6 months and 2 months respectively. Afterwards the permanent porcelain-fused-to-metal bridges were applied to the patients. So that, the vertical dimensions of occlusion were rearranged and the esthetic problems of 2 patients caused by anterior cross-bite were eliminated.

CONCLUSION

After the prosthetic rehabilitations, both patients stated that they were satisfied with both esthetic and chewing function.

Keywords: anterior cross-bite correction, class III malocclusion, occlusal vertical dimension, prosthetic rehabilitation

Prosthetic rehabilitation of a patient with congenitally missing lateral incisor and multiple diastema: a case report

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INTRODUCTION Multiple diastema may be hereditary, acquired or functional and it is mostly seen in the absence of maxillary incisors. It can be treated by orthodontics, laminate veneers and direct bonding restorations when it affects esthetics.

CASE REPORT In this case report, the prosthetic rehabilitation of a 30-year-old female patient who has congenitally missing maxillary right lateral incisor, right first premolar and multiple diastema. In the direction of digital analysis, a wax-up was prepared for the patient and tooth dimensions were evaluated after diastema closure. Afterwards tooth preparations were made in the guidance of mock-up and the prosthetic rehabilitation was completed with 4 e.max press MT ingot laminate veneers and 3-unit e.max press bridge. The e.max restorations were cemented with dual-cure resin cement.

CONCLUSION At 2 months of follow-up, the patient stated that she had no complaints and she was satisfied with the esthetics of prosthetic rehabilitation.

Keywords: diastema closure, laminate veneer, multiple diastema, prosthetic rehabilitation

Prosthetic Treatment of A Patient With Vertical Dimension Loss:A Case Report

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Introduction: Tooth wear is a disease characterized by the loss of hard tissues of the teeth except tooth caries. The underlying causes are also different according to the type of wear. This case report presents a patient who needs to be increased in vertical dimension, using temporary crowns, adaptation to the new vertical dimension and treatment with permanent fixed restorations.

Case Report: A 65 year-old male patient referred to department of the prosthodontics at Atatürk University, faculty of dentistry with the complaints of aesthetic appearance and worn in his teeth. The intraoral examination of the patient, revealed that upper and lower teeth were worn halfway through the crowns and the dentin was exposed on the incisal edges. Vertical dimension of rest of the patient was determined using the Niswonger method, occlusal vertical dimension was measured in the case of full closure. By adjusting the freeway space 3mm, the vertical size was gradually increased with temporary crowns. At the end of 5 weeks, after making sure that the patient did not develop any joint pain, the patient's permanent measure was taken and metal supported porcelain bridges were made.

Conclusion: In cases where the vertical dimension has to be increased, the permanent fixed prosthetic should not be immediately restored. First, in the long term, whether the adaptation to the new vertical dimension can be achieved or not, should be followed, and then the prosthetic treatment should be completed in a vertical dimension where the patient is comfortable. As in our case, permanent fixed prosthetic treatment by increasing the vertical dimension gradually with temporary crown is one of alternative treatment options.

Keywords: tooth wear, vertical dimension, prosthetic treatment

Investigation of Effective of Adhesive Cements on the Bonding of Different Post Systems

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Aim: The aim of the study was to examine the effect of different post systems (cast post, prefabricated ceramic post) and three different cements (zinc phosphate, glass ionomer, and resin cement) on retention and to determine the suitable combination for retention.

Material-Methods: Ninety teeth with single root were used in the study. The crown of each tooth was removed from one mm above of the cemento-enamel junction by using a diamond bur.

Endodontic treatment were performed on the teeth and post spaces were prepared by using a special drill of Cosmo post systems. The roots were embedded in acrylic blocks. The samples were divided into three groups (sandblasting/ unsandblasting cast post or prefabricated ceramic post) (n=3). Each of these groups was divided into 3 subgroups for three different cements. After cementation, tensile force was applied on the samples with Instron testing machine. ANOVA and Duncan's multiple range tests were performed for statistical analysis (P = 0.05).

Results: According to the results of the variance analysis, it was found that the post type (P < 0.001), the cement type and post-cement interaction had statistically significant effect (P < 0.05) on the bond strength of post to root dentin.

Conclusions: The best retention was seen in the sandblasting cast post cemented with zinc phosphate cement and with glass ionomer cement. On the other hand, the prefabricated ceramic post cemented with zinc phosphate cement and unsandblasting cast post cemented with resin cement showed the least retention.

Keywords: Bond strength, cast post, ceramic post, dental cements, sandblasting

Difference of saliva CGRP and substance-p levels after dental implant surgery at first day and seventh day

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Aim: Context—Calcitonin gene-related peptide (CGRP), substance P play an important role in inflammatory pain. In order to gain further insight into the role of CGRP and Substance-P in post operative pain at implant surgery, we evaluated and compared changes for these two neuropeptides at saliva with ELISA test.

Material-Method: This prospective clinical trial included 40 dental implant patients. All patients were assigned same painkiller and antibiotics protocol. For collection of saliva samples, patients were asked to spit directly into a specimen cup on 1 day and 7. days after surgery. Approximately 2 ml of saliva was collected. Saliva samples were immediately frozen and stored in the laboratory at -80°C until analysis by ELISA method.

Results:

CGRP and Substance-p levels were significantly different at 1 and 7 days after surgery ($p < 0,05$)

Conclusion: CGRP and substance-p saliva levels were studied earlier at migraine, headaches and rat oral mucosa. We showed that after surgery, this neuropeptides saliva levels has significantly increased at first day after oral implant surgery.

Keywords: Substance P, CGRP, postoperative pain, dental implant surgery, saliva neuropeptides

Maxillary molar tooth treatment which has perforation and excessive structure loss by using MTA and endocrown: a case report

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Introduction: In this case report is present treatment of a maxillary first molar tooth has perforation and excessive structure loss

Case reports: A 22-year-old female patient complaining of pain in upper left posterior region applied to our clinic. Clinical examination revealed amalgam fillings and percussion sensitivity of teeth 26. Radiographic examination revealed that the associated amalgam filling was extended to the furcation. After local anesthesia and rubber dam isolation was performed, the access cavity was opened. Perforation was seen, the canals could not be localized. The root canal and perforation area were examined in detail using cone-beam computerized tomography. According to CBCT examination, canal orifices were found with long steel round bur. MB2 canal detected in CBCT image was found by ultrasonic. Root canals were obturated with gutta-percha and AH26 root canal sealer using the cold lateral compaction technique. The perforation area was repaired with MTA (Dentsply Tulsa Dental, OK). The other session was covered with a fluid composite (3M Espe, Kerr, USA) over the cured MTA and canal orifices. Pulp chamber was prepared with the diamond bur. The impressions were taken with additional silicone (Zhermack HD+ Elite). The endocrown restoration was produced by IPS E.max press (Ivoclar Vivadent). Endocrown was cemented with dual-cure resin cement.

In the six months follow-up after completion of the treatment, there were no clinic and radiographic symptoms in patient.

Conclusions: CBCT, a three-dimensional imaging method, provides important contributions to the determination of the endodontic diagnosis and treatment protocols. Endocrowns appear to be a valuable option for endodontically treated posterior teeth with extensive loss of coronal structure.

Keywords: Endocrown, MTA, perforation, CBCT

Root canal treatment of a maxillary central incisor tooth with calcific metamorphosis: A case report

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Introduction:

The present case report describes treatment of a maxillary left central incisor tooth with calcific metamorphosis.

Case Report:

A 45-years-old female patient referred to our clinic with a chief complaint of pain in the maxillary left central incisor. On radiographic examination it was revealed that the middle third of the root canal was calcified and a lesion was present in periapical area. The patient informed us about a trauma history on anterior region few years ago. After local anesthesia application, rubber dam isolation was performed and the access cavity was prepared. The root canal could not be localized, thus a long shaft diamond round bur has been used carefully. X-rays were taken to avoid perforation. A 37% orthophosphoric acid etching was applied in the access cavity for 5 minutes and 5% citric acid was applied and activated with Endoactivator (Dentsply, Mallifler, Canada). Finally the root canal was localized and prepared using Reciproc (VDW, Munich, Germany) instruments under 2.5% sodium hypochlorite irrigation. Then, the root canal was obturated with AH Plus and gutta-percha using vertical compaction technique. In the 1 year follow-up after completion of the treatment, there was no clinical and radiographic symptoms.

Conclusion:

It is important to be careful when looking for a canal in the treatment of a calcified root canal. Long shaft burs and x-rays are useful in the treatment of calcified root canals.

Keywords: Calcific metamorphosis, Long shaft burs, Calcified canal

Non-syndromic oligodontia: Two case reports

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Introduction: In this case report two female patients suffered from a non-syndromic oligodontia were presented. Oligodontia, commonly describe as a condition involving absence of six or more teeth excluding the third molar, is a rare anomaly affecting very small amount of the population. The absence of teeth can affect social relations and masticatory function.

Case Reports: 17 year old and 18 year old two female patients reported to the our clinic for a routine dental check-up. Theirs past medical history were non-contributory and family history revealed that they were born to non-consanguineous marriage with normal delivery. The patients had no history of trauma or extractions. Extra oral examination revealed a face with normal facial profile both patients.

Case 1: In the first patient, as permanent teeth maxillary central incisors, left first premolar, mandibular central incisors, first premolars, first molars teeth and as primary teeth maxillary lateral incisors, canines, right first molar, second molars, mandibular canines, second molars were present during clinical examination.

Case 2: In the second patient, as permanent teeth maxillary central incisors, right first molar, mandibular first premolars, first molars teeth, as primary teeth maxillary lateral incisors, canines, right first molar, second molars, mandibular central incisors, lateral incisors, canines, second molars were present during clinical examination.

Conclusions: Patients with oligodontia as a part of a syndrome may have abnormalities in other parts of the body; such as the skin, ears, eyes, and skeleton. Hence in these cases, oligodontia is not associated with any syndrome which is rare finding.

Keywords: dental anomaly, oligodontia, tooth agenesis

Treatment of Failed Horizontal Root Fracture with Intentional Replantation Technique

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Introduction: Horizontal root fractures are complex traumatic injuries that require multidisciplinary management. In this case report, treatment with the intentionally replantation of a previously failed horizontal root fracture treated patient is presented.

Case: A 14-year-old female patient referred to our clinic. On the patient's examination; we were detected horizontal root fracture on the middle-third of right upper central incisor. Also, we were observed intra-radicular splinting with hedstrom file and root canal treatment. However, the tooth was symptomatic and had mobility. Thus, it was decided to intentionally replantation the patient's teeth. The fractured tooth is intentionally extracted atraumatically. Then, the separated fragments are bonded with Super-Bond and root canal preparation, fiber post performed extraorally. The tooth was replanted into the socket and splinted to the adjacent teeth with ortodontics wire. 21 days after the splint was removed. The tooth was asymptomatic; there was no discoloration of the crown, no mobility, no tenderness to percussion or palpation.

Conclusion: These results obtained from the study showed that using intentionally replantation technique may be advantageous.

Keywords: Horizontal root fracture, replantation, trauma

Prosthetic treatment of a patient with acquired maxillary defect - case report

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Introduction: Acquired maxillary defects are defined by defect which occur after resection of malignant or benign tumor in maxilla. The extent of the resection is dependent upon the size, location and potential behavior of the tumor. First of all, closing the defect during surgery is a more appropriate approach, but this isn't always possible.

Prosthetic obturation of the defect is required when the surgical treatment is unsatisfactory or impracticable. In this case, a patient who had previously made partial maxilla resection was given information about new prosthetic treatment because of the inability to use the prosthesis.

Case Report: A 70-year-old male patient was applied to the Department of Prosthetic Dental clinic with the complaint of a previous obturator weight.

In patient history, he had stated surgical operation with the diagnosis of squamous cell carcinoma before six years ago. Clinical examination revealed abrasion artificial teeth in the the obturator used and fracture in the anterior region of the prosthesis.

A new prosthesis plan has been made to remove the complaints from the patient's first prosthesis.

Conclusions: The hollow bulb obturator is lighter and the patient relaxes during function.

Keywords: Acquired maxillary defects, prosthetic treatment, tumor

Ganglion cyst of the temporomandibular joint: A very rare case

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Introduction: Ganglion cysts, benign soft tissue tumors, most commonly appear on the back of the hand at the wrist joint and are very rarely encountered in the region of the temporomandibular joint (TMJ). Ganglion cysts occurring in or near to joints such as the wrist, foot or knee. Ganglion Cysts can be also found in TMJ but which is reported very few in literature.

Case Report: We report a ganglion cyst of the TMJ in a 24-year-old woman. The patient experienced pain and presented with a prominence in the left TMJ region, anterior to the tragus. She had some divergence in skin sensation in the left mental region of the mandible. In CBCT images, we saw a cystic lesion roughly 6 mm in diameter adjacent to the lateral anterior of the joint and seen a minimal cortical degeneration of the left TMJ. The MRI scans approved the mass to be a TMJ cyst, showed a rounded hypodense mass of soft tissue lateral to the right TMJ region.

Conclusion: TMJ cysts are usually asymptomatic and patients' chief complaint was a mass in the preauricular region. The patients are aware only of a lump in the preauricular region. There may be pain and obvious deformity. In our case, she complained of swelling, limited opening and painful mass in the left preauricular region of 6-month duration. Treatment is surgical but, if a diagnosis can be made, a period of conservative management is justified.

Keywords: Ganglion cyst, temporomandibular joint, CBCT

A rare presentation of dens invaginatus in the maxillar second molar

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Introduction: Dens invaginatus, also known as dens in dente, is a rare anomaly affecting human dentition by invagination of the enamel organ into the dental papilla that begins at the crown and often extends to the root even before the calcification of the dental tissues.

Case Report: A 38-year-old man was referred to our department of dentomaxillofacial radiology. His medical history revealed he was taking antidepressant medication and he had no history of pain or swelling and traumatic injury. We authorized intraoral and extraoral examinations. Conventional routine dental panoramic film (DPR) was obtained the dens in dente in the right maxillar second molar. We present an unusual case report to focuses on the radiological and clinical features of dens in dente by using DPR and CBCT.

Conclusion: The presence of dens in dente is more common in the lateral upper incisors (0,25-5,1%), being rare in molars. Early diagnosis of dens invaginatus is crucial and requires thorough clinical examination of all teeth. If there is a cavity, treatment is root filling or extraction but, if a diagnosis can be made early, a period of conservative and preventive management, fissure sealant, is justified.

Keywords: dens invaginatus, CBCT, diagnosis

An interesting case of Central Giant Cell Granuloma in a patient with amelogenesis imperfecta

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Introduction: The central giant cell granuloma (GCG) is fairly common in the jaws and it is a nonneoplastic bone disease, probably reactive to some unknown stimulus. Usually, it occurs in persons 30 years of age or younger with painless swelling and an asymmetry in facial appearance. Amelogenesis Imperfecta (AI) is a hereditary developmental disorder affecting deposition, calcification or maturation of dental enamel in both the primary and permanent dentitions. Also called as hereditary enamel dysplasia, hereditary brown opalescent teeth.

Case: We report a central giant cell granuloma at the molar region in a 8-year-old child. The patient came to radiology department to routine dental check. His medical history revealed no history of traumatic injury was reported. We authorized intraoral and extraoral examinations. After thorough examination, the patient was diagnosed as having pitted hypoplastic type of AI There is not any pain. Conventional routine dental panoramic film (DPR) presented the second molar tooth on the left side have a more pronounced radiolucent area than the right side. Then, for a detailed review, we decided to perform a CBCT images, we saw a multilocular hypodense lesion areas were observed, which affected the anterior margin of the mandibular ramus, forming buccal expansion and perforation in the mandible. GCG was reported after the histopathological evaluation.

Conclusion: Treatment is surgical but, if an early diagnosis can be made, a period of conservative management is justified. This case report focuses on the radiological and clinical features of the GCG and AI ta by using CBCT.

Keywords: Giant cell granuloma, diagnosis, amelogenesis imperfecta

A comparative study of the effects of different LED light curing units on the surface hardness of different colored compomers

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Aim

Colored compomers are frequently used in pediatric dentistry to increase the motivation of children. Power of the curing light and color of the restorative material play an important role in resin material polymerization. The aim of this study is to evaluate the surface hardness of three different colored compomers which were cured with three different curing units.

Materials and Methods

In this study pink, blue and A2 colored compomer samples are cured with Woodpecker, Valo and GC curing units and divided into three equal groups (n=8). For each sample upper and lower surface Vickers microhardness test values (100 gr/10 seconds) were obtained.

Results

In evaluation of the samples' lower surface hardness values, the interaction between the color of compomer restorations and curing units was found statistically significant ($p=0.004$). The lowest lower surface hardness values were obtained from GC curing unit and pink compomer groups. While the lowest upper surface hardness values were in GC and Valo curing units, the highest values were obtained in blue compomers. Valo curing unit represented same upper surface hardness values for different colored compomers. In pink colored compomer the difference between the upper and lower surface hardness values for all curing units were statistically significant ($p<0.05$).

Conclusion

In this study, it was found that the color of compomer and different LED curing units affect the upper and lower surface hardness of compomer restorations. GC curing units has the lowest surface hardness values when used with colored compomer restorations.

Keywords: Colored compomer, LED curing, Micro hardness, Polymerization, Vickers

A rare case report: coronoid process hyperplasia

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Introduction: Coronoid process hyperplasia (CPH) is an uncommon condition that results in limitation of mouth opening. It is based on normal or hyperplastic bony histology. The etiology of CPH has not yet been described. CPH might be unilateral or bilateral. The bilateral form is 4.1 times more frequent than the unilateral form. The peak age of diagnosis is often in the 2nd-3rd decade for both unilateral and bilateral cases. This condition is usually painless, slow and progressive that affecting mostly men. We aimed to present the clinical and radiological findings of a patient with bilateral CPH.

Case Report: A 23-year-old male patient was referred to our clinic with a complaint of limitation in mouth opening in 2017. He had no systemic disease and history of trauma. On orthopantomography and TMJ radiography taken from the patient, bilateral CPH was seen. The patient had been scanned with CBCT, and CBCT views bilateral CPH diagnosis was supported.

Conclusion: Differential diagnoses to rule out for CPH include Jacob disease, anterior disc displacement without reduction, myospasm of masticatory muscles, ankylosis, coronoid osteomas and osteochondromas. In this condition, radiographic examination is very important, because diagnosis of CPH is only possible by radiographic examination. CBCT can be used to evaluate the bone morphology in more detail, and planning surgical treatment. Early and differential diagnosis are important to improve patient's quality of life.

Keywords: Coronoid hyperplasia, coronoid impingement syndrome, elongated coronoid process

Fusion of a supernumerary tooth with right mandibular second molar: a report of a rare case

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Introduction: Dental fusion is a morphological dental anomaly, commonly characterized by a clinically apparent wide tooth. It occurs because of the completely or partially union of dentin or enamel in developing tooth germs. Fusion usually seen in the anterior region of the maxilla. Besides that, fusions in molar teeth are rarely reported. In this case report we present to mandibular second molar that appeared to have been fused with a supernumerary tooth.

Case Reports: A 13-year-old male patient presented to the radiology dental service to realize panoramic radiography for initial orthodontic treatment. Upon clinical intra-oral examination, supernumerary tooth was detected on the buccal aspect of the right mandibular second molar. Radiographic evaluation was unclear for this tooth's root canal morphology. So it was decided that the patient would receive a CBCT to assess the relationship between these teeth. The CBCT images revealed that the right mandibular second molar tooth did not complete root development and fusion at the root level was observed with a supernumerary tooth. The patient was referred to the orthodontic department with regular follow-up because dental abnormally had not resulted in any problem in dental health.

Conclusion: Presence of fused teeth in the posterior permanent dentition is a rare condition, but nevertheless, this is high significance in dental anomalies and can affect any tooth in the mouth. The fusing of the teeth should be correctly determined and a thorough radiographic examination must be performed before treatment for a successful result.

Keywords: Cone-beam computed tomography, dental anomaly, fusion

Prosthetic rehabilitation in a case with anterior open-bite: a case report

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Introduction: There is no vertical closure between the anterior teeth in the open-bite centric occlusion and it is one of the clinical findings. Many factors such as unbalanced activity in the jaw muscles, unusual language pressure, may result. Opening complaint may be skeletally or dental. Dental open-bite can be treated with prosthetic applications. The treatment of skeletally open-bite in adult patients is possible with orthognathic surgery.

Aesthetic problems such as discoloration, deformity, fracture, fractures in the front teeth can be removed with dental prosthesis and much less material can be removed from the dental tissue and ceramic aesthetic treatments can be done with laminate veneer.

Case: A 21-year-old female patient who had an open-bite and had metal ceramic restoration for treatment was referred to our clinic with complaints of aesthetic, phonation and smell. Intraoral examination and aesthetic analysis of the patient were performed. Orthodontic and prosthetic treatment alternatives were explained. Because of the time problem, prosthetic treatment was decided. Periodontal Phase 1 treatment was performed after the existing restorations were dismantled. Temporary crown was made to reshape the soft touch. One month later, after the preparation and impression procedures were completed, the permanent restorations were completed.

Conclusion: The patient's 3-month clinic follow-up did not encounter the aesthetic, function, and phonation problems. It was determined that marginal alignments with veneers were acceptable.

Keywords: Open-bite, Skeletally open-bite, Aesthetic

Detailed Examination of Osteochondroma on the Left Mandibular Condyle by Cone Beam Computed Tomography: A Case Report

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Introduction: Osteochondroma is one of the most common benign tumours of the long skeleton, but is rare in the maxillofacial region. The sites most commonly reported in the mandible are the condyle and coronoid process, and typical features are progressive asymmetry, pain, masticatory problems, malocclusion and dysfunction of the temporomandibular joint.

Case Report: A 26-year-old female patient was referred to our clinic due to chief complaints of pain during mouth opening. The clinical examination revealed minimal facial asymmetry with the chin point deviated to the left. Crepitus and clicking sound was observed on opening and closing the mouth. A panoramic image revealed an irregular bony outgrowth on the left condylar head. The better assess the location, size and this view of the lesion or to perform differential diagnosis was scanned cone-beam-computed-tomography(CBCT) of the patient. CBCT showed a large bony mass arising from the left mandibular condyle extending medially and superiorly to the temporal bone. The lesion density was continuous with the structures of the mandibular condyle. With additional imaging of CBCT and three-phase bone scan, tentative diagnosis of osteochondroma or osteoma on the left mandibular condyle was made. Histopathological evaluation of the patients who were operated surgery has emerged as a result of the diagnosis of osteochondroma.

Conclusion: CBCT is an alternative modality to CT or MRI that should be performed in all cases of suspected osteochondroma of the mandibular condyle. Also CBCT for further evaluation, is an useful diagnostic tool for definite anatomic position, adjacent, size determined and 3D image creating.

Keywords: CBCT, mandibular condyle, osteocartilaginous exostosis, osteochondroma

Mesiodens: A Case Report

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Introduction: Purpose of this case report; surgical treatment of mesiodens. Supernumerary teeth located maxillary midline between central incisors are called as mesiodens. Generally, they remain asymptomatic and are discovered during routine radiographic examination. The common complications of mesiodens are retention of the primary tooth, delayed eruption of the permanent tooth, ectopic eruptions, diastema, follicular cysts and other alterations, requiring surgical or orthodontic interventions.

Case Report: A 9-year-old male patient admitted to our clinic due to midline diastema between the maxillary central incisors. Diastema was seen in clinical examination. A supernumerary tooth was seen between the central teeth on panoramic radiograph. It was decided to extract the mesiodens under general anesthesia because of incompatible child. Palatal mucoperiosteal flap was elevated. Mesiodens was extracted and palatal flap was closed primarily and sutured with 3.0 silk suture. The operation was performed without any intraoperative or postoperative complication.

Conclusion: Early diagnosis of the supernumerary teeth is important to avoid complications like these malocclusion, displacement of adjacent teeth and impaired esthetics. Because of possible complications, mesiodens should be removed surgically.

Keywords: mesiodens, oral surgery, supernumerary

Effects of advertisements and dentists choosing *dental hygiene products*

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Aim

Our survey goals are determine the role of advertisements on elections and to determine by which criteria individuals choose oral hygiene products and to direct the content of advertisements and dentists to ensure community awareness.

Material & Methods

450 surveys were conducted in different cities. In describing the categorical changes, the percentages and frequencies were used as explanatory statistical data. Mean and standard deviation were used to show continuous variables. The obtained data were evaluated statistically by Pearson chi-square test. Significance is $p < 0.05$.

Results

According to the descriptive statistical results, 78,2% of the respondents do not find the ads reliable. 88,4% of those who find it reliable find toothpaste advertisements effective. Only 21% find the dentists in the toothpaste advertisements trustworthy. As the age of participants increases, the rate of who believing dentists in advertisements decrease, is statistically significant. ($p < 0.05$) Dentists in the selection of toothpaste are the third effective. The most of the family and the environment, then the ads. We present to select the most effective visuals from 24 different subjects from various advertisements; first three of results are; aesthetic changes, health information, and experimental ads. The advertisements with celebrity and dentists are in the 5th and 6th place.

Conclusions

Advertisements reliability have been found to be influenced by age, gender, education and level of income. The use of dentists in toothpaste advertisements can reduce the reliability to dentists. According to the data, increasing the efficiency and reliability of the advertisements, selection of ads content is important.

Keywords: dental advertisements, oral hygiene products, dentists role

Gender differences in the articular eminence inclination and space of the temporomandibular joint in generalized joint hypermobility

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Aim: Generalized joint hypermobility (GJH) is a benign hereditary disorder characterized by increased joint mobility in numerous joints. The aims of this study was a radiological examination of the articular eminence inclination and space of the temporomandibular joint in GJH patient who has temporomandibular joint subluxation (TMJS).

Materials-Methods: 33 patients (22 females, 11 males) with GJH who admitted to our clinic with the complaint of TMJS were included in the study. The eminence inclination and the joint space were measured on the cone-beam computed tomography (CBCT).

Results: In this study, there was no statistically significant difference among sex and all measurements and age. However the eminence inclination was higher in females than in males, but space values and age were higher in males than females in both joints (left and right). There was found statistically significant correlation between the superior joint space (SS) and the age, bf (best fit) angle, posterior joint space (PS) ($p < 0,05$).

Conclusion: Gender has no difference in articular angles [bf, tr (top roof)] and joint spaces (AS, SS, PS) in patients with both GJH and TMJS. However, in females with GJH, the articular eminence is more perpendicular and the temporomandibular joint spaces are low. But, for more general conclusions, it is suggested that studies should be carried out that the number of male and female patients is equal and higher.

Keywords: generalized joint hypermobility, subluxation, temporomandibular joint

Esthetic rehabilitation of anterior teeth with severely decayed (Case report)

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Introduction: The recovery of the natural tooth aesthetics is becoming increasingly important in dental practices.

Case: This case report discusses the application of direct composite laminate veneer in the treatment of severely decayed anterior teeth. After detailed dental and medical anamnesis was taken from patient who came to our clinic with aesthetic justification, direct composite laminate veneers were planned. The treatment was completed with two sessions. The functional and esthetic expectations of the patient were satisfied and the patient was followed up.

Conclusion: Direct composite laminate veneer applications can be preferred because of immediate aesthetic outcome, rapid application time and relatively low cost.

Keywords: Case Report, Composite Resin, Dental Caries

Osteoradionecrosis of the mandible following laryngeal radiotherapy

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Introduction: Osteoradionecrosis is one of the most important and a serious complication of patients undergoing radiation therapy, and this situation is disturbing patients as much as doctors. Osteoradionecrosis is a complication that can usually occur in patients who are treated with radiation therapy also it can occur in spontaneously.

Case Report: A 51-year-old male patient admitted to our clinic who has been diagnosed with larynx carcinoma for the last two years. Intraoral inspection showed us, in the right lower first premolar region there is a painful lesion on palpation, with partial bony surfaces with a flow of pus in. The area of destruction revealed by panoramic and periapical film from the lesion area was diagnosed with osteoradionecrosis with the help of cone beam computerized tomography.

Conclusion: It was understood that performed intraoral examination showed that the patient did not pay attention to oral hygiene. Osteoradionecrosis has multiple causes yet oral hygiene can be control by the patient. Providing good oral hygiene in patients receiving radiotherapy may possibly prevent such possible poor outcomes from occurring.

Keywords: osteoradionecrosis, radiotherapy, oral hygiene, dental trauma

Female and male temporomandibular joint patients marital status

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Aim: Investigation of the marital status of temporomandibular joint patients applied to the clinic.

Material-Methods: The clinical status of 85 patients (64 female patients, 21 male patients) who were applied to the clinic was learned according to the information obtained by the clinical practitioner. The patients were grouped as single women, married women, single men and married men. Obtained descriptive percentages have been calculated.

Results: According to the calculated results, 63,5% of temporomandibular joint patients were single and 36,5% were married. Also, the grouping rate of all groups according to the patients; the rate of single females was 48,2%, the rate of married females was 27,1%, the rate of single males was 15,3% and the rate of married males was 9,4%.

Conclusions: It has been observed that there is a relationship between temporomandibular joint patients and their marital status. Especially the single females (48,2%) had a high ratio compared to the other groups, and the high ratio was found among the single females of both sexes (63,5%).

Keywords: temporomandibular joint, marital status, gender

A case report: Coronally positioned flap with connective tissue graft

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Introduction:

Gingival recession is apical migration of junctional epithelium, leading to unaesthetic appearance and root hypersensitivity. Although several surgical procedures have been used to achieve predictable root coverage, these include pedicle grafts with or without connective tissue grafts, free gingival autograft, connective tissue grafts, coronally advanced flaps alone coronally positioned flap with connective tissue graft. Hence, the aim of the present case report was to clinically evaluate the management of root coverage (Miller Class I) by coronally positioned flap with connective tissue graft.

Case Report:

A 35-year-old patient presented to our clinic with a complaint of dental sensitivity. As a result of clinical and radiological examinations, we decided to treat coronally positional flap with connective tissue graft for No. 22. Vertical incisions along the mesial and distal sides of the tooth with a sulcular incision and the flap removed. Subsequently, the connective tissue graft was obtained from the left palatal region of the patient. First, the connective tissue graft was stitched with the resorbable thread on the patient's receiving site. Then the flap was stitched with polypropylene suture to position it in the coronally. Routine suggestions were made to the patient. The patient was called for control a week later and sutured.

Conclusion:

The results of this case report favor the theory that root coverage with connective tissue graft could produce an increase in root coverage and keratinized tissue. Based on this case report, Miller Class I recession defects can be treated successfully when connective tissue graft is combined with coronally positioned flap.

Keywords: gingival, recession, connective tissue graft

Complete gemination of maxillary incisor with separate root canal: a case report

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Introduction: Gemination occurs when a single tooth bud attempts to divide by invagination resulting in two completely or incompletely separated crowns with a single root or root canal. Clinically seen as wide crowns and the tooth count is evaluated as normal when the anomalous tooth is counted as one. In this case report we present complete gemination of maxillary central incisor tooth.

Case Report: A 8-year-old male patient presented to the dental clinic with a complaint of enlarged maxillary incisor. The patient was healthy with no reported history of orofacial trauma. Upon clinical intraoral examination revealed that the right central incisor appeared to have increased mesiodistal dimension with slight notching present in the incisal region. Radiographic evaluation revealed two separated roots of the right maxillary incisor. In the CBCT sections, it was determined that the right maxillary central incisor had two separate roots and root canals. Tooth count was normal when the anomalous tooth is counted as one. It was evaluated as complete gemination. Regular follow-up was recommended because dental anomaly did not lead to a probing for dental health at this time. The patient was directed to the relevant departments for the other teeth.

Conclusion: Even if it is difficult the recognition and treatment of such anomalies, detailed examination should be made and a thorough radiographic examination must be performed before treatment for ensure proper functional and esthetic satisfaction.

Keywords: dental anomalies, gemination, cbct

Temporary Restoration of Maxillary Lateral Incisor Loss Using a Fiber Reinforced Adhesive Bridge: Two Case Reports

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Introduction: Conventional fixed prosthesis or single implant fixed crown may be considered as a treatment option for the treatment of edentulous area in single tooth deficiency. However, as an alternative treatment, a fiber-reinforced adhesive bridge can be applied as a conservative approach.

Case: Case 1: In this case report, a 17-year-old male patient was applied for esthetic loss due to maxillary left lateral tooth missing congenitally, after cleft lip palate treatment at Orthodontics Department

Case 2: A 17-year-old female patient was applied to our clinic for the treatment of aesthetic loss due to maxillary left lateral tooth loss. In this case of anamnesis from the patient, root canal treatment was performed on the tooth, but the prognosis of the tooth was not good and the tooth was extracted.

For implant treatment the patient's age was not appropriate. For these reason, temporary fiber reinforced bridge was applied for the patient until implant treatment. Fiber reinforced adhesive bridges were cemented with self etch dual cure resin cement by supporting the palatal surfaces of the teeth 21 and 23. Occlusion was checked and the restoration was completed.

Fiber-reinforced adhesive bridges are considered a good treatment option in cases where a temporary use is planned. In our study, there was no functional and aesthetic problem in the fiber-reinforced adhesive bridge after the patient's follow-up.

Conclusion: The use of this conservative approach in the treatment of provisional process is very important in the meeting of the aesthetic and functional needs of the patient.

Keywords: adhesive bridge, cementation, fiber reinforced

Prosthetic rehabilitation of a patient with flabby ridge: case report

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Introduction: Retention and stability are important factors affecting the success of total prosthesis. The presence of hyper mobile soft (fibrous) tissues on the alveolar ridge lead to difficulty in construction and using the prosthesis. This type of hyper mobile soft tissue occurs depending on resorption of the underlying bone, presence of pathological occurrences, systemic diseases or using a bad-made prosthesis. The impression to be taken in the presence of fibrous tissue requires special methods. In this case report was given information about selective pressure impression method applied to patient with hyper mobile soft tissue in the anterior region of the maxilla for prosthesis construction.

Case Report: A 67-year-old female patient was applied to the Department of prosthodontics clinic with the complaint of previous prosthesis.

In the clinical examination of the patient, fibrous ridge was detected in the anterior region of the maxilla and new prosthesis was made to remove the complaints.

Conclusions: Using selective pressure impression method in patients with flabby ridge increase their prosthesis satisfaction

Keywords: Fibrous tissue, impression, prosthetic treatment

Treatment of a hopeless teeth using intentional replantation procedure: Case report

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Introduction: The present case report describes management of an endodontically treated maxillary first premolar indicated using intentional replantation procedure.

Case reports: A healthy 30 year-old male patient was referred to the School of Dentistry of Ataturk University for extraction of the tooth 24. Clinically, an unrestorable deep caries of the palatal and mesial region and an old disto-occlusal composit resin restoration of the tooth were observed. The tooth was not sensitive to percussion and palpation. Radiographically, periapical radiolucencies were observed at the apexes of the tooth. The level of the tooth in palatal and mesial region was under the bone level. The entire surgical procedure was done under microscopic vision. After administering local anesthesia, the tooth was atraumatically extracted. The root canal treatment, retrograd cavity preparation and filling, and composite resin restoration were performed extra-orally. Semi-rigid splinting was done using a fiber-reinforced, composite-resin bonded splint. The splint was removed after 25 days. There were no signs of periapical infection and the gingiva had healed. The patient was referred to a prosthodontist for crown preparation. A three month recall radiography and absence of any symptoms indicated satisfactory treatment outcome.

Conclusions: Intentional replantation could be considered as an alternative treatment option for endodontically treated hopeless teeth.

Keywords: conservative treatment, endodontics, intentional replantation

Retreatment of maxillary lateral incisor treated with previously regenerative endodontic procedure

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Introduction: The aim of this study is to present retreatment of a mature permanent maxillary incisor treated with regenerative endodontic protocol previously.

Case: A healthy female patient was referred to the Department of Endodontics at the School of Dentistry of Ataturk University for evaluation and treatment of left maxillary incisor. The tooth was asymptomatic to percussion and palpation. Radiographically, revascularization treatment of teeth 11,21 and 22 was shown. The radiograph has shown failure of the revascularization therapy of tooth 22 due to the horizontal fracture. At the first appointment, the tooth was isolated with a rubber dam. After access cavity preparation, MTA in the cervical zone was removed with ultrasonic tips. The working length was estimated using an apex locator and confirmed with periapical radiographs. Canal was prepared using Reciproc (VDW GmbH, Munich, Germany) rotary files and K-files with 2.5% sodium hypochlorite, followed by 1% citric acid and a sterile saline solution. After root canal obturation a fiber post was bonded to the canal and the access cavity was sealed with composite resin. Finally, patient was referred to a prosthodontist for crown preparation. After six months later, the tooth was asymptomatic clinically and radiographically.

Conclusion: Retreatment of failed regenerative endodontic protocol has some challenges. In this case report, these challenges were successfully managed.

Keywords: endodontics, regenerative endodontic protocol, retreatment

Non surgical endodontic treatment of a large periradicular lesion: A case report

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Introduction: In this case presents,non surgical endodontic treatment of mandibular right incisor tooth with mobility and large periapical lesion by using cold lateral compaction technique with peridental splinting.

Case: A 25 -year-old male patient was referred to our clinic with severe pain on the mandibular first right incisor tooth.In the clinic examination there was no swelling on the region.Tooth showed sensitivity to percussion and palpation.In the radiographic examination there was a large periapical lesion around apex of mandibular first right incisor tooth.When the patient came our clinic,the first attempt was made by another dentist.In the first visit;after rubber dam isolation,the Access cavity was performed with a diamond bur.Canal preparation was made with rotary systems.Calcium hydroxide was placed and the tooth was temporarily filled.Splint was made between the left second incisor to the right second incisor because of the mobility of the tooth.After 7-10 days later second visit was performed.At the second visit there was no pain and sensitiviity to palpation or percussion.The root canal was obturated with gutta-percha and sealapex root canal sealer using the cold lateral compaction technique.Splint was removed after one week later because there was a little mobility.After eight month follow-up there was observable healing in the lesion.Tooth was asymptomatic and patient has no complaint.

Conclusions: Healing was achieved without any need for further endodontic surgical intervention after 8 month. Even in the presence of a large periapical lesion, the appropriate diagnosis and treatment of the infected root canal system allowed complete healing without surgical procedures.

Keywords: calcium hydroxide, endodontic treatment, periapical lesion

Endodontic management of a mandibular second premolar with three root canals

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Introduction: Success of endodontic treatment depends on the knowledge of root canal anatomy. This is especially essential in cases where extra root canals are expected. The purpose of this clinical report was to present the management of a mandibular second premolar with three root canals.

Case: A 25-year old male with non-contributory medical history came to the Faculty of Dentistry, Ataturk University, Erzurum, Turkey, for dental examination. Clinically, it was observed that the pulp was exposed by a carious lesion in mandibular left second premolar. Tooth 35 showed no response to cold and electric pulp testing and was not sensitive to percussion and palpation. Based on the clinical and radiographic findings, a diagnosis of asymptomatic apical periodontitis of tooth 35 was made. Access opening was done under local anesthesia after rubber dam isolation. After removing the coronal pulp, three canals (mesiobuccal, distobuccal and lingual) were detected. Root filling material in the coronal of lingual canal was removed with peeso reamer, such that at least 5 mm of apical gutta-percha remained. A fiber post was bonded to the canal and the access cavity was sealed with composite resin. The patient was referred to a prosthodontist for crown preparation. A ten month recall radiography and absence of any symptoms indicated satisfactory treatment outcome.

Conclusion: The clinicians should be aware of the possible variations of the root canal systems.

Keywords: endodontics, premolar, three root canals

Diastema Closure With A Direct Technique Approach

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Introduction: Diastema closure is one of the most demanded treatments in aesthetic dentistry. Ideally, orthodontic treatment must be accomplished to give proper space relationships and good occlusion but in some cases this is not possible and we need the help of the restorative treatment.

Case: A 26-year-old male patient applied to Department of Prosthodontic, Faculty of Dentistry Yuzuncuyil University to close the diastases between the anterior teeth of the maxillary. There was no systemic discomfort in the examination of the patient and there was good oral hygiene and class 1 relationship between the teeth. It was found that there was no parafunctional habit in the patient. To see the final form of treatment, before taking impression of the teeth that was sent to the laboratory to make wax up. At chairside silicone index prepared from wax-up. It was decided to close diastemas with composite material under the guideline of silicone index. Left and right maxillary central, lateral, canine and first premolar etched with 37% phosphoric acid 30 seconds. Afterwards, thoroughly rinse off the etchant with water spray and dry the tooth surfaces with oil-free air. The etched enamel surface has a chalky white appearance. Then the surfaces of all the teeth were bonded (Adper™ Single Bond Plus Adhesive Refill) and diastemas closed with composite material (3M Filtek Ultimate) to provide aesthetic rehabilitation. After contouring, finishing, and polishing anterior composites the desired aesthetic expectation was achieved.

Conclusion: The use of composite materials in closing the diastemas in the anterior teeth provides both aesthetic results and non-invasive option.

Keywords: Aesthetic, Composite, Diastema, Non-invasive



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