

Conclusions: There was no statistical relationship between Gleason scores, tumor percentages of pathological specimens, biochemical recurrence and AMACR staining intensity.

S37 TRANSRECTAL ULTRASOUND GUIDED SATURATION BIOPSY OF THE PROSTATE USING STEREOTACTIC TRANSPERINEAL TECHNIQUE

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Introduction & Objectives: To determine the prostate cancer detection rates and complications of stereotactic transperineal prostate biopsy (STPB).

Material & Methods: A total of 48 men (mean age 60.9 years) with at least two sets of prior prostate biopsies underwent transrectal ultrasound (TRUS) guided stereotactic transperineal biopsy of the prostate. Prostate rebiopsy indications were serum prostate specific antigen (PSA) levels greater than 2.5 ng/ml, increasing serum PSA and/or abnormal digital rectal examination and/or presence of high grade prostatic intraepithelial (HGPI) neoplasia or atypical small acinar proliferation (ASAP) at previous biopsies. The procedure was performed at dorsal lithotomy position under general anesthesia using a perineal 0.5 cm brachytherapy template attached to a biplanar transrectal ultrasound probe. The 3D transperineal mapping approach was used to array biopsy cores at 5-mm intervals. In patients with a prostate volume greater than 40 cc, additional core biopsies were obtained distally in coronal rows to provide improved sampling. Specimens from each zone were labeled and sent separately for pathological examination.

Results: Mean PSA level at STPB was 15.9 ng/ml (range 4.03 to 59.57). The number of saturation biopsy cores obtained per patient was close to the prostate gland volume in cubic centimeters (cm³). At least 2 sets of biopsies were performed in all patients previously, and 32 (66%) had undergone 3 or more sets. An average of 54.5 cores was obtained. Prostate adenocarcinoma was detected in 15 of 48 (31%) patients. The most common Gleason score detected was 6 (60% of the patients). Mean percentage of malignant cores was 11.9%. Cancer would have been missed in 3 patients if the biopsy cores were taken at 10-mm intervals (McNemar test, 5-mm vs. 10-mm, P=0.005). No significant differences were found between the negative and positive biopsy groups except the patient age and transitional zone PSA density. Multivariate logistic regression analysis revealed that age and presence of ASAP or HGPI at previous biopsies were significant independent factors predicting prostate cancer (OR 1.234, 95% CI 1.059-1.386 for age; OR 5.264, 95% CI 0.980-28.269 for presence of ASAP or HGPI, P<0.05). No major complications were observed however five patients (10%) developed acute urinary retention after the procedure requiring urethral catheterization.

Conclusions: STPB is a well-tolerated procedure with minimal morbidity which can be considered for the diagnosis of prostate cancer in patients with previous negative transrectal prostate biopsies.

S38 HISTOSCANNING: A NEW DIAGNOSTIC MODALITY FOR THE DETECTION, LOCATION AND TUMOUR VOLUME DETERMINATION OF PROSTATE CANCER

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Introduction & Objectives: HistoScanning (HS) is a new method for the analysis and interpretation of ultrasound data collected during transrectal ultrasound (TRUS) examination. The goal of this study is to compare the volume and location of cancerous lesions estimated by HS and by histology.

Material & Methods: Ultrasound data were collected during a TRUS performed before radical surgery of 81 patients with biopsy-confirmed prostate cancer (PCa). The HS analysis was done before the histology analysis. Whole-mounted prostate specimens were step-sectioned every 5 mm. HS findings were compared with those of the histology, and sensitivity, specificity and negative predictive values were computed. The statistical analysis was also based on prior knowledge that a distance between the probe and the gland of 3.5 mm or more reduced the amount of ultrasound data available for HS analysis.

Results: Cancers of 0.2 ml or greater were found in 77 prostate specimens at histology and the distance from the ultrasound probe to the posterior wall of the gland (PG distance) was less than 3.5 mm in 59 patients and more than 3.5 mm in 25. The HS sensitivity and specificity for detecting foci ≥ 0.5 ml were 85% and 33% respectively. The sensitivity increased to 96% when the PG distance was less than 3.5 mm. The sensitivity, specificity and negative predictive value for presence of cancerous lesion of any volume in gland sextants were 91%, 45% and 70% respectively. These parameters were 96%, 43% and 81% when the PG distance was less than 3.5 mm.

Conclusions: Small cancerous foci in the prostate can be detected by HS. However, the quality of HS results depends on limitations of the ultrasound examination, like the probe-gland distance. HistoScanning has the potential to become an attractive imaging technology for the detection of PCa.

S39 INAPPARENT TUMOR ON ENDORECTAL MULTIMODALITY MAGNETIC RESONANCE IMAGING OF PROSTATE: COULD WE SPARE THESE PATIENTS A PROSTATE BIOPSY?

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Introduction & Objectives: The aim of this study is to examine whether one could spare prostate biopsy in patients with a clinical suspicion of prostate cancer (PCa) but inapparent tumor on multimodality endorectal magnetic resonance imaging (e-MRI) of the prostate.

Material & Methods: A total of 142 patients with a clinical suspicion of PCa underwent conventional and functional e-MRI of the prostate and subsequently prostate biopsy. The inclusion criteria were prostate-specific antigen level >4 ng/ml or a suspicious finding on digital rectal examination. The images were interpreted by a highly experienced radiologist and were considered negative for PCa in all cases. Regardless of the negative findings, all patients underwent an 18-core prostate biopsy. Functional e-MRI included contrast-enhanced e-MRI and diffusion-weighted imaging. The examinations were performed on a closed 1.0-T system combined with an endorectal body phased-array coil. The clinicopathologic parameters of the patients included age, prostate-specific antigen level, digital rectal examination findings, PCa detection rate, clinically significant PCa detection rate, high-grade PCa detection rate, and e-MRI specificity.

Results: The median age of the patients was 68.3 years, and the median prostate-specific antigen level was 11.6 ng/ml. The digital rectal examination findings were positive in 53 patients (37.3%) and negative in 89 patients (62.7%). Overall, PCa was detected in N=26 patients (18.3%) of patients, with N=11 cases (42.3%) cases defined as clinically significant and N=8 (30.7%) as high grade. Overall, the e-MRI specificity was 81.7%.

Conclusions: The results of our study exhibit that the absence of tumor on e-MRI scans of patients with a clinical suspicion of PCa does not rule out the probability of clinically significant and high-grade PCa, thus one should not spare these patients a prostate biopsy.

S40 ROBOTIC-ASSISTED RADICAL PROSTATECTOMY IN MEN \geq 75 YEARS OF AGE. AN ANALYSIS OF 90 CONSECUTIVE CASES

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Introduction & Objectives: Robot-assisted radical prostatectomy (RARP) has become profoundly popular and with the expanding experience obtained with it, the selection criteria for the procedure have also widened and included more challenging cases. The aim of this study is to evaluate the surgical, oncologic and functional outcomes in men \geq 75 years of age undergoing RARP.

Material & Methods: The records of n=3500 men who underwent RARP from February 2006 to December 2011 were retrospectively reviewed. A total of n=90 (2.57%) were \geq 75 years of age.

Results: The median age of the patient was 76.44 years, median PSA value 9.37 ng/ml. Minor complications were noted in 27.77% of cases and major in 1.11%. The median operative time was 143.07 min and the length of catheterisation was 6.42 days. Organ-confined disease was noted in 62.22% patients, extraprostatic extension in 37.77% and a positive surgical margin status in 6.66%. At 12 months 86.9% were continent and 39.6% of preoperative potent patients who underwent a NVB preservation were potent. No disease-specific mortality was detected in the follow-up period but biochemical progression was encountered in 13.33 % of cases.

Conclusions: Our findings suggest that RARP in patients \geq 75 years of age is a safe surgical procedure with limited complications and excellent oncologic and functional outcomes. Nevertheless, RARP in patients \geq 75 years should be limited to a selected collective with a good health status and an individual life expectancy of more than 10 years in order to achieve the oncological advantages of the surgery.

S41 EVALUATION OF SURGICAL MARGIN STATUS IN PATIENTS UNDERGOING ROBOTIC-ASSISTED RADICAL PROSTATECTOMY FOR LOW, INTERMEDIATE, AND HIGH-RISK PROSTATE CANCER. AN ANALYSIS OF 3500 CONSECUTIVE CASES

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Introduction & Objectives: Although the past years robot-assisted radical prostatectomy (RARP) has become profoundly popular, some urologists remain sceptic regarding the lack of tactile sensation and subsequently a possible increase