

patients (7.04%) died because of concomitant diseases. Two patients (2.81%) developed osseous metastases of the prostatic carcinoma.

**Conclusions:** Considering the operative technique there were 9 cases (4.45%) of incidental prostatic carcinoma following open prostatectomy and 62 cases (7.36%) following TURP ( $p=0.05$ ). The reason for such discrepancies in the results could be that during the open procedures only the adenomatous tissue of transitional zone is removed, while during transurethral procedure there is presence of the tissue that is resected from the peripheral zone which is more prone for development of prostatic carcinoma.

## C91

### Prostate brachytherapy with permanent iodine ( $^{125}\text{I}$ ) seed implant (LDR) – intermediate biochemical results and complications

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**Introduction and Objectives:** To analyze retrospectively the intermediate biochemical results and complications, after 147 cases of localized prostate cancer, treated with prostate brachytherapy using permanent  $^{125}\text{I}$  implantation (Low Dose Rate – LDR).

**Material and Methods:** Between October 2006 and May 2009, 147 patients, age 49–82 years old, were treated with permanent  $^{125}\text{I}$  implantation brachytherapy. This technique was applied as monotherapy (145 Gy) for 110 patients, who had favorable prognostic, according with ABS recommendations (stage T1b–T2a, Gleason score  $\leq 6$ , PSA  $\leq 10$  ng/ml). For 37 patients with unfavorable prognostic (stage T2b–T2c, Gleason score 7–10, PSA  $> 10$ ), brachytherapy iodine implantation followed by external beam radiation therapy (EBRT – 45 Gy), at 6 weeks postimplant, was performed, to avoid biochemical relapse. The prostate volume was smaller than 60 g (mean volume 40 g), IPSS  $< 8$ , Qmax  $> 12$  ml/s and TURP was not performed within the past 6 months. In 35 cases we used short-term neoadjuvant hormone therapy (1–3 months). In order to accomplish the implantation planning, we followed the ESTRO/EAU recommendations for the definition of target volumes of risk organs and dosimetric parameters. The mean values were: D90 (indicator of implant quality and of probability of biochemical control) – 189 Gy, V100 – 98%, V150 – 75.9% and V200 – 43.4%. We monitored PSA value every 3 months during the first year and every 6 months thereafter.

**Results:** The evolution of the PSA levels, as indicated by our intermediate data, was the following: PSA mean value at implantation – 8.6 ng/ml, decreased with 71% at 3 months, 88% at 6 months, 90% at 9 months and 94% at 1 year. The PSA values at 18 months decreased with only 85%, probably due to PSA bounce. We registered 8 young patients, age 49–62 years old, with PSA bounce, starting at 12 months postimplant. We also had two patients with two consecutive elevations of the PSA levels, who are closely monitored (biochemical relapse?). Regarding the complications, immediately postoperative 40 patients had irritative voiding symptoms (urinary morbidity grade I and II according to RTOG scale) and two of them presented transitory complete urinary retention (urinary morbidity grade III). Another 7 patients developed rectal toxicity grade I and 2 cases mild radiation proctitis (rectal toxicity

grade III), at 9 months postimplant. Twelve patients presented brachytherapy-induced erectile dysfunction.

**Conclusions:** Prostate brachytherapy using permanent  $^{125}\text{I}$  seed implantation is a viable alternative to radical prostatectomy or external beam radiation therapy, for the curative treatment of localized prostate cancer. It determined an acceptable grade of urinary morbidity, minimum rectal toxicity and high probability to preserve erectile function.

## C92

### The advantages of using the transrectal biplane transducer with 3D reconstruction for prostate explorations

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**Introduction and Objectives:** We want evaluate the advantages of using the new transrectal transducer with 10 Mhz frequency, 3D reconstruction, biplane simultaneously and with option for end fire puncture in exploration of the prostate.

**Material and Methods:** Between December 2008 and May 2009, 201 patients diagnosed with BPH (benign prostatic hyperplasia) or with suspicion of prostate cancer (PC) [based of PSA levels and/or abnormal digital rectal examination (DRE)] were investigated using transrectal ultrasound examination, using a biplane transducer with 3D reconstruction, type B&K 8818. At patients with PC suspicion, we performed 6–10 prostate punctures

**Results:** We examined 113 patients with BPH and 88 patients with suspicion of PC (which was confirmed in 21 cases). The 3D reconstruction (along with the PSA values) allowed the decrease of the number of patients who needed prostate biopsy, (there weren't "suspect images" for PC at these patients). The prostate images have a very good quality, in both plans (sagittal and transversal), the scanning under an angle of 180 with a high frequency, allowing a very good exposure of the peripheral zone.

**Conclusions:** This type of transducer has many advantages: very clear images, which corroborated with the PSA exam can decrease the number of patients with "inutile" punctures; Doppler mode for all the plans and 3D reconstruction; simultaneous images at prostate explorations (transversal and sagittal plans).

## C93

### The role of adipocytokines in prostate cancer

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**Introduction and Objectives:** Few studies have investigated the role of insulin or insulin resistance in prostate cancer. Several mechanisms could explain the association of obesity and metabolic syndrome with prostate cancer risk, including insulin and IGF signaling, and inflammation pathways

**Material and Methods:** We selected 153 patients who are divided in 2 groups: group A, 107 patients with metabolic syndrome without prostate cancer (MS-PC), and group B, 46 patients with metabolic syndrome and prostate cancer (MS+PC). IR (insulin resistance) was determined used Homeostasis model assessment (HOMA-IR). The diagnosis for MS was made according to International Diabetes Federation. Body weight, waist circumference, hip circumference, blood pressure were determined. Body mass index (BMI) was calculated. Biochemical analyses including fasting plasma glucose, HbA1c, total cholesterol, triglycerides, high-density lipoprotein (HDL-C), fasting plasma insulin, adiponectin, leptin, TNF alpha, IL-6 and prostate-specific antigen (PSA) were performed. The prostate

gland volume was measured using transrectal ultrasound. All patient with PSA > 3 ng/ml underwent prostate biopsy.

**Results:** The average age was 66.23±12.72 in group A and 68.27±12.9 years in group B. HOMA-IR (2.35± 4.3 vs 3.45±6.4), adiponectin (10.89±4.96 vs 7.3±4.5 ng/ml), TNF alpha (4.4± 4.1 vs 5.3±3.8 pg/ml), IL-6 (4.1±3.6 vs 5.9±6.8 pg/ml) was significantly higher in MS+PC patients (all p < 0.05). By multiple linear regression, we found that among independent predictors of HOMA-IR were the body mass index, PSA level, and the serum levels of leptin, TNF alpha, IL-6 (positive correlation) and adiponectin (negative correlation). TNF alpha and IL-6 levels was correlated with the extent of histological injury (p = 0.001).

**Conclusions:** The mechanisms by which adipocytokines promote insulin resistance are complex, and our understanding incomplete. Several pathogenic mechanisms may be involved in the effect of insulin resistance in prostate cancer and adipocytokines and inflammatory cytokines has a statistically significant role at least in our study. Further investigations are needed.

#### C94

##### **Anastomotic stricture after radical prostatectomy – risk factors**

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**Introduction and Objectives:** Identification of parameters associated with an increased risk of the vesicourethral anastomosis stricture formation after the radical prostatectomy (RP).

**Material and Methods:** A total of 651 patients underwent RP from January 2000 to December 2008. Patients with missing data about the follow-up were excluded from the analysis (n = 42). In addition to standard parameters, specimen weight, margin status, operating time, intraoperative blood loss, technique of bladder neck reconstruction, time to catheter removal, surgical complications and postoperative radiotherapy were registered. The freedom from the anastomotic stricture formation was calculated using the Kaplan-Meier method, multivariate analysis was performed by using the stepwise regression method.

**Results:** Mean age was 62 years (40–79), mean level of the prostate specific antigen was 10.25 ng/ml (0.59–50.00 ng/ml). As locally advanced were identified 26.76% of specimen, median weight was 49 g (17–203 g). Median operating time was 135 minutes (44–540), mean blood loss 1395 ml and median period of catheterization was 14 days (6–42). Surgical complication occurred in 68 (11.17%) cases. Adjuvant or salvage radiotherapy was indicated in 80 (13.14%) patients. A total of 103 (16.91%) men underwent an endoscopic procedure due to the anastomotic stricture formation, 27 (4.43%) patients repeatedly. Perioperative blood loss (p = 0.034), time to catheter removal (p = 0.001), surgical complication (p < 0.0001) and postoperative radiotherapy (p = 0.0091) were found to be statistically significant in prediction of the anastomotic stricture formation.

**Conclusions:** Neither any of the preoperative and histological parameters nor surgical technique increased a risk of the vesicourethral anastomosis stricture after RP. Patients at greatest risk for a subsequent endoscopic procedure were those with both perioperative blood loss greater than 1700 ml and surgical complication.

#### C95

##### **Reevaluation of Gleason score, extraprostatic extension and surgical margins status on radical prostatectomy specimens: learning curve in uropathology**

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**Introduction and Objectives:** It is well known that there is a substantial inter and intraobserver variability in evaluation of critical pathohistological parameters on RP specimens. Particularly, these variabilities are present in work of pathologists from community hospitals e.i. pathologists that routinely perform whole area of surgical pathology and are not dedicated to uropathology field alone. Recently, we have started to evaluate our 10-year material from clinico-pathological point of view. In time period 2000–2009 we managed 2735 needle core biopsies and 936 radical prostatectomy specimens. By reevaluating pathohistological parameters on RP specimens and assuming that our pathologist has made progress in uropathology field from year 2004 we try to define if there is learning curve and which factors influence it.

**Material and Methods:** One of us (BP) reevaluated Gleason score (GS), extraprostatic extension (EPE) and surgical margins status (SM) on 53 radical prostatectomy specimens originally diagnosed in 2004.

**Results:** Overall concordance in SM assessment was reached in 39 cases (73%), EPE in 35 cases (66%) and GS in 34 cases (64%), respectively. All 7 GS 4 and 5 cases in year 2004 turned to GS 6 in present review, 6 cases GS 6 turned to GS 7 and 3 cases of GS 7 turned to GS 6, respectively. One case GS 7 turned to GS 8. In all but one of the discordant GS cases the difference showed ±1 GS digit. Fourteen cases that were negatively assessed for EPE in 2004 turned to be EPE positive (14/53, 26%). Four cases assessed as SM negative turned to be positive (4/53, 7.5%), six SM positive cases turned to be negative (6/53, 11%) and four undetermined cases in 2004 turned to be negative (4/53, 7.5%).

**Conclusions:** Assuming that current pathological assessment is correct (considering possible intraobserver variability error) we showed good concordance between original 2004 Gleason score assessment and current 2009 one (mostly within ±1 GS digit). However, we couldn't be satisfied with original extraprostatic extension assessment which, on reevaluation showed shift from negative to positive in 26%. Regarding surgical margins assessment we observed shift from positive/undetermined in 2004 to negative in 10 cases (19%). Considering year 2004 as a starting year for this study we conclude that learning curve for our pathologist mostly affected surgical margins and extraprostatic extension assessment. To achieve lesser variability and more accurate diagnosis pathologist needs to dedicate himself to uropathology field. Urologist may contribute to this effort by improving operative technique (less surface artifacts and incisions which make correct pathological analysis difficult).

#### C96

##### **Follow-up of patients with accidental finding of infiltration of pelvic lymph nodes after radical prostatectomy**

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**Introduction and Objectives:** Retrospective evaluation of patients surviving with positive pelvic lymph nodes (N1) after radical prostatectomy (RPE).

**Material and Methods:** We have retrospectively evaluated 325 patients, who underwent RPE in our hospital since 1998 to 2006. Overall follow up was 3 to 10 years. Our interest was focused on patients with unexpected finding of positive lymph nodes