

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