

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.

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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.

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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).

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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

in histological specimen after RPE. We evaluated outcomes of adjuvant treatment (PSA level) and survival of patients.

Results: Ten patients (3%) had a carcinoma infiltration of lymph nodes; their average PSA level was 11.8 before radical prostatectomy. Their average age was 65 years. Gleason score 6 was in 6 patients, 7 was in 4 patients and 8-10 was in 5 patients. Sequential radiotherapy combined with hormonal treatment was used in 7 patients and 2 patients underwent the only androgen deprivation. One patient refused sequential treatment. No patient died for prostate cancer. Seven patients are in long-time remission with PSA <0.1. Three patients are with slow progression (DT). Patient, who refused a treatment, is in a long-time remission with PSA <0.1.

Conclusions: Infiltration of pelvic lymph nodes is a poor prognostic factor. An adjuvant treatment would be indicated. Use of adjuvant oncological treatment can achieve a long-time remission and survival of patient.

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Comparison of clinical and pathological features between prostate cancers detected by the first biopsy and by re-biopsy with an extended scheme

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Introduction and Objectives: To compare clinical and pathological characteristics between patients undergoing radical prostatectomy for clinically localized prostate cancer (PC) detected in the first prostate biopsy and those detected in the re-biopsy with a 24 core extended scheme.

Material and Methods: Overall, 256 patients treated with radical prostatectomy between January 2005 and December 2007 were eligible for analysis. PC was detected by the first prostate biopsy with at least 6 to maximal 12 cores (mean 8.6) in 201 patients (group 1), and in 55 men by extended re-biopsy with 24 cores (group 2), respectively. Re-biopsy rate ranged between 1 and 8 (mean 2.5). Clinical and pathological parameters were compared between both groups using Student's t-test and Chi-squared test. Cohen's kappa (k) coefficient was used to measure the agreement of Gleason scores of the fine-needle-core biopsies and radical prostatectomy specimens.

Results: Mean age was similar with 61.1 years of group 1 and 61.7 years of group 2 (p=0.633). The median serum PSA and PSA ratios were 5.9 ng/ml and 11.1% in group 1 as well as 7.8 ng/ml and 10.9% in group 2 (p=0.372 and p=0.596), respectively. A suspicious digital rectal examination (DRE) was assessed in 33.6% of group 1 and 10.6% of group 2 (p=0.002). Stages pT2, pT3a and pT3 b were assessed in 77%, 15.5% and 7.5% of group 1 and 85.3%, 9.1% and 5.5% of group 2 (p=0.618), respectively. Gleason score of ≤ 6, 7 and ≥ 8 in prostatic biopsy specimens were diagnosed in 70.2%, 24.0% and 5.8% in group 1 and 69.2%, 23.1% and 7.7% in group 2 (p=0.874). The corresponding Gleason scores of the radical prostatectomy specimens were 34.5%, 56.5% and 9.0% in group 1 and 39.6%, 56.6% and 3.8% in group 2 (p=0.415). Agreement between biopsy and prostatectomy Gleason Score expressed by Cohen's kappa, revealed coefficients of 0.250 in group 1 and 0.356 in group 2. More specifically, concordance was higher in group 2 with 51.9% vs. 45.7% in group 1. Biopsy Gleason score showed a more frequent undergrading in group 1 with 47.2% vs. 34.6% in group 2, whereas overgrading was more frequently observed in group 2 with 13.5% vs. 7.1% in group 1.

Conclusions: The comparison revealed 2 relevant differences. Firstly, the concordance between Gleason score of needle biopsy and radical prostatectomy specimens was distinctly higher in

the extended re-biopsy cohort. And secondly, patients with PC detected by a 24 core extended-re-biopsy scheme presented with a significantly lower rate of suspicious DRE. Hence, the clinical impact of routinely performed DRE in patients after negative prostate biopsy appears small.

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Two generations of Partin Tables: Comparison of predictive accuracy

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Introduction and Objectives: The external validity of predicting pathological stage in clinically localized prostate cancer between the Partin Tables of 2001 and their updated version of 2007 was compared.

Material and Methods: Clinical and pathological data of 687 consecutive patients who underwent radical prostatectomy for clinically localized prostate cancer between January 2003 and December 2008 were used to compare the Partin Tables of 2001 and 2007 in their external validity. Receiver operating characteristic (ROC) curve were performed to compare the observed and predicted rates of the Partin Tables for organ-confined disease (OC), extracapsular extension (ECE), seminal vesicle invasion (SVI) and lymph node involvement (LN).

Results: Mean age of patients was 62.1 (±6.4) years, and mean PSA was 8.2 (±5.2) ng/ml. An unsuspected digital rectal examination (T1c) was assessed in 71.5% of patients. Of the whole cohort, 76.2% of men were presented with OC, 17.8% had ECE, 6.0% showed SVI and 1.2% had lymph node involvement in the obturator region. The area under the receiver operating characteristic curve (AUC) of the Partin Tables of 2001 and 2007 were 0.727 and 0.722 for OC, and 0.662 and 0.650 for ECE. The Partin Tables of 2001 and 2007 showed an AUC of 0.788 and 0.779 for SVI, and 0.786 and 0.746 for LN, respectively.

Conclusions: Our external validation shows a good accuracy of the updated Tables to predict OC, SVI and LN. However, the predictive accuracy for ECE was only modest for both versions of the Partin Tables. Overall, the newer version of the Partin Tables could not outbalance the version of 2001 in their predictive accuracy for any pathological stage, and they failed to demonstrate a clear advantage. Our results underline the necessity to perform an external validation before the implementation of a new predicting tool.

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Occurrence of prostate cancer in patients with muscle-invasive bladder cancer after radical cystoprostatectomy

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Introduction and Objectives: Abstract objective is evaluate incidence of prostate cancer (PC) and prostate transitional cell cancer in patients with muscle-invasive bladder cancer after radical cystoprostatectomy (CE).

Material and Methods: Retrospective study of patient file with muscle-invasive bladder cancer who underwent surgery (radical cystoprostatectomy) in years 2000 – 2009. Surgery underwent 150 men. Histological investigation was focused on prostate to locate prostate cancer and prostate transitional cell cancer. Mean age of our patient file was 62 years.

Results: Histological investigation located prostate cancer in 23 patients (15%) and prostate transitional cell cancer in 12 patients (8%). Gleason score of prostate cancer was between 3 till 9, therefrom 5 patients (22%) had Gleason score ≥7. All