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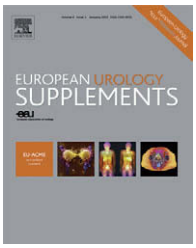

EAU 5th South Eastern European Meeting (SEEM)

Poster Session 1: Bladder cancer and urinary diversion
Friday, 9 October 2009, 10:40–12:40
Room 1

S1
The expression of Cyclooxygenase 2 (COX-2) in myofibroblasts surrounding bladder carcinomas: from "reactive neighbourhood" to "active contributor"

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Introduction and Objectives: Accumulated evidence indicates that carcinogenesis is closely associated with the transformation of normal stroma into a 'reactive' stromal phenotype. The present study investigates the role of COX-2 – an enzyme that catalyzes the synthesis of prostaglandins – in this stromal remodeling by evaluating and comparing the expression in stromal myofibroblasts that surround normal transitional epithelium and carcinomas.
Material and Methods: Immunohistochemical methodology was performed on formalin-fixed, paraffin-embedded sections from urinary bladder carcinomas of 140 patients (94 males (67.1%) and 46 females (32.9%), who underwent curative transurethral resection. The patients' age ranged from 23 to 90 years, (mean age = 70 years). Their diagnoses were reported as follows: Grade I n = 27(19.3%), Grade II n = 30(21.4%), and Grade III n = 54(38.6%). 29(20.7%) cases of normal bladder epithelium were selected from patients that underwent diagnostic biopsies. Monoclonal antibody against the human Cox-2 molecule was used. A molecular profile was created for each patient and the induction or downregulation of Cox-2 expression was evaluated and documented. Relationship between Cox-2 and grades of carcinogenesis were evaluated by Spearman's rank correlation coefficient and validated by Fisher's exact test.
Results: Myofibroblasts surrounding normal epithelium showed no cytoplasmic immunoreactivity in 41.4%, and only 6.9% overexpressed this enzyme. 63% of myofibroblasts surrounding carcinomas presented with moderate and strong immunoreactivity, and only 12.6% had no staining. The Spearman rank correlation coefficient (rs) revealed a positive correlation (r = 0.29, p-value = 0.001), meaning that COX-2 is overexpressed in myofibroblasts surrounding bladder carcinomas. Furthermore positive correlation has been revealed when Spearman rank correlation coefficient (rs) performed for Grades of carcinogenesis (normal–Grade I, r = 0.30, p-value = 0.026, Grade I–Grade II, r = 0.31, p-value = 0.018, Grade II–Grade III, r = 0.38, p-value <0.001).
Conclusions: COX-2 expression is upregulated in stromal myofibroblasts surrounding bladder carcinomas compared to normal transitional epithelium. This study emphasizes that the role of COX-2, which is important molecular target of chemoprevention, is not only confined to the tumor epithelial cells but is also extended in the stroma especially in the stromal myofibroblasts, which are important players in the process of bladder carcinogenesis.

S2
Evaluation of the clinical value of urinary NMP22 as a marker in the surveillance of superficial transitional cell carcinoma of the urinary bladder

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Introduction and Objectives: To prospectively evaluate the clinical role of urinary NMP22 as a marker for transitional cell carcinoma of the urinary bladder in surveillance settings.
Material and Methods: Single voided specimens were obtained from 25 consecutive patients who presented for cystoscopy. All of these patients presented with previously treated superficial bladder TCC with of without haematuria or irritative symptoms for regular follow up. The urine sample was used for urine microscopy, and for measuring NMP22 levels in 12 to 36 months of follow up.
Results: Bladder tumours were found in 5 of 25 (20%) patients on surveillance. The NMP22 levels were significantly lower in patients with lower stage (Ta vs. T1–3), low grade (G1, G2 vs. G3, CIS) and papillary morphology. The optimum threshold for NMP22 was 10.0 U/ml, providing a sensitivity, specificity, positive predictive value and negative predictive value of 40.0, 85, 38.5 and 88.0% respectively. Sensitivity and specificity were better in patients being on surveillance for a longe period and with sterile urine samples.
Conclusions: Urinary NMP22 levels are significantly higher in patients with bladder tumour than in those negative for tumours, and test predictability improves with increasing stage and grade. The overall sensitivity for urinary NMP22 is similar to cystoscopy but can not replace it. With cystoscopy together gives almost 100% accurate diagnosis of relapsing bladder TCC. Our study suggests that the clinical role of urinary NMP22 as a diagnostic marker can be at best supportive only, with potential advantage in follow up after resection of high risk bladder TCC (T1G3, CIS).

S3
Urine IL8 concentration correlates with advanced bladder tumors

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Introduction and Objectives: High prevalence of bladder carcinoma together with reccurence tendency represent