important medical problem in spite of successful early treatment procedures. Local tumor grows as well as metastatic potential is critically dependent of microenvironmental growth factor production. Several chemokines were pointed as important in TCC pathogenesis. On the other side, local specific antitumor immune response represents most important factor that influence tumor growth and spreading and finally disease outcome. Therefore, urine cytokine levels could be valuable indicators of both tumor agressivity and local immune response effectiveness. Our aim was to investigate urine cytokine levels in patients with TCC correlating them to clinical and pathological signs of tumor advances.

Material and Methods: Naturally micturated urine samples were obtained from 40 patients with newly diagnosed bladder cancer. Patients were divided according to cytological, radiological and patohistological findings in group with less (G2, pT1) or more aggressive TCC (G3-G4, pT2-pT3). Concentration of cytokines (IL1b, TNFa, IFNg, IL2, IL4, IL5, IL6, IL8, IL10, IL12) was estimated with commercial flowcytometric test kit.

Results: Levels of IL2, T lymphocyte activating cytokine, together with IL12 were significantly higher in urine samples from patients with more aggressive TCC. IL6 concentration was higher in group with advanced TCC. Most striking finding was significant elevation of TH2 cytokines IL4 and IL5, together with IL8, that reached almoust 10 times more concentrations in urine samples from patients with more aggressive TCC (IL4 = 2279±270 vs 139±133 pg, IL5 = 2498±118 vs 54±50 pg, IL8 = 1863±533 vs 271±197 pg, respectivelly). Levels of IFNg, IL1b, IL10 and TNFa did not differ between two groups.

Conclusions: Our study results indicate that more aggressive bladder tumor forms are associated with local TH2 immune response, together with high IL8 chemokine levels.

S4

Chronic inflammation and bladder cancer: How hot is the link?

S. Kontos[1] *, A. Kominea[2], K. Balampanis[3], V. Politis[1], V. Simaioforidis[1], I. Fokitis[1], G. Sotiropoulou-Bonikou[4]. *[1]General Hospital of Nikaia, Dept. of Urology, Peiraeus, Greece; [2]General Hospital of Aegion, Dept. of Pathology, Aegion, Greece; [3]Athens University Medical School, Attiko University Hospital, Dept. of Internal Medicine, Athens, Greece; [4]University of Patras Medical School, Dept. of Anatomy, Patras, Greece*

Introduction and Objectives: Nuclear Factor κ-B (NFκB) is the 'supervisor' protein of chronic inflammation and malignant transformation. NFκB remains in the cytoplasm transcriptionally silent. Activation of NFκB in response to extracellular stimuli lead to translocation to the nucleus and activation of transcription of a plethora of genes, involved in tumor promotion and proliferation. Our objective was to evaluate the expression of NFκB in Transitional Cell Carcinoma of the bladder and its correlation with histological Grade and clinicopathological parameters.

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 NFκB was used. A molecular profile was created for each patient and the induction or downregulation of nuclear and cytoplasmic NFκB expression was evaluated and documented. Relationship between NFκB and Grades of carcinogenesis were evaluated by Spearman's rank correlation coefficient and validated by Fisher's exact test.

Results: NFκB signal was both cytoplasmic and nuclear. NFκB cytoplasmic expression was undetectable in 6.9% (2/29) of specimens of normal epithelium and overexpressed in 38.9% (7/29). On the other hand, none of the well differentiated tumors and only 3.3% (1/30) of moderate and 1.8% (1/54) of poor differentiated carcinomas showed negative NFκB cytoplasmic staining. Statistical analysis revealed a negative correlation between cytoplasmic molecular expression and grades of differentiation. As normal cells progressively gained atypical characteristics the cytoplasmic expression of NFκB has been downregulated. As far as nuclear staining of NFκB is concerned, 100% (29/29) of normal transitional epithelium lacked nuclear staining. Only in 13% (7/54) of poorly differentiated carcinomas there was no nuclear staining and 26% (14/54) of them showed strong immunoreactivity. Statistical analysis revealed a strong positive association between histological grade and nuclear expression of NFκB (test of trend p-value <0.001). No association with age or gender was observed.

Conclusions: Our results indicate an induction of this key molecule along the carcinogenesis path and the level of differentiation. Although inflammation has long been known as a localized protective reaction of tissue, there has been a new realization about its role in cancer. These observations imply that anti-inflammatory agents that suppress NFκB should have a potential role in bladder cancer chemoprevention.

S5

Primary adenocarcinoma of the urinary bladder. Presentation of 5 cases

I. Xoxakos[1] *, G. Sotiropoulou[2], D. Rompolis[1], V. Chatzinikolaou[2], C. Fliatouras[1], C. Kalyvas[1], D. Stokidis[1]. *[1]G.H. Korinthos, Dept. of Urology, Korinthos, Greece; [2]G.H. Korinthos, Dept. of Pathology, Korinthos, Greece*

Introduction and Objectives: Adenocarcinomas of urinary bladder is a rare type of neoplasm and account for 0.5–2 % of all urinary bladder cancers. They can be primary or those arising from urachus. Histologically, adenocarcinomas are mucus secreting and may have glandular, colloid, signet-ring, hepatoid or mixed patterns.

Material and Methods: 5 patients were diagnosed as primary urinary bladder adenocarcinomas within the last 4 years in the G.h.of Korinthos.

Results: 3 of all patients were 54–85 years old males, with medium grade primary bladder adenocarcinomas which were infiltrating the muscular bladder wall.The rest 2 cases concerned 73 and 76 female patients with low grade muscle infiltrating primary bladder adenocarcinoma. Immunohistochemical examination followed and confirmed the diagnosis demonstrating: CK7 (+), CK20 (+), CK 34βE12 (+), CEA (+), PSA (−), PSAP (−), Vimentin (−). All patients were presented with intermittent macroscopic heamaturia, which was accompanied by symptoms of vesical irritability (frequency, urgency and dysuria) in 4 of them. All patients underwent initially transurethral resection of bladder tumour which was followed by radical cystectomy in 3 of them. In 2 patients identified sites of metastasis at the time of diagnosis.

Conclusions: Primary adenocarcinomas of urinary bladder are quite rare compared to all other types of bladder cancers.They are often localized at the time of diagnosis, but muscle invasion is usually present. Prognosis is poor and 5 year survival is usually less than 40%, despite of aggressive surgical intervention.