C123

The value of adjuvant instillational treatments in outcomes of Ta,T1 bladder cancers

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Introduction and Objectives: To compare transurethral resection only with transurethral resection plus adjuvant instillational treatment for non-invasive (Ta,T1) bladder cancer.
Material and Methods: Between 2000 and April 2005, 185 patients with Ta and T1 bladder cancers were included in this study. The patients were divided in two groups: Group A including 81 patients who were treated (2000–2002) with transurethral resection of the bladder tumours (TURB). Follow-up: 76–108 months (mean 86 months). Group B including 104 patients with TURB, 1 instillation with 50 mg of Epirubicin in the first 6 p.o. hours. Follow-up 44–80 months (mean 62 months). When we received the pathological report, the patients were divided, according to EAU protocols risk factors, in 3 categories: Low risk: 7 patients. They did not receive any other treatment only follow-up (cystoscopy, cytology) at 3 months, after 19 months, then every year. Medium risk: 45 patients. 29 without treatment, 13 with intravesical chemotherapy and 9 with BCG (according to their option). High risk: 52 patients, 41 receiving intravesical BCG. The follow-up was performed every 3 months in the first year, 4 months in the 2nd year, 6 months in the 3rd and 4th year, than every year.
Results: In group A, the percent of recurrencies according to the risk categories are: 30%, 37.5%, 58%. The total recurrence in group A is 44.4%. In group B, the percent of recurrencies are: 0%, 20.4%, 41.5%. The total recurrence is 29.8%. The benefit of 1 instillation with Epirubicin post-TURB is 10.4%, particularly for low risk group is 30%. Intravesical chemotherapy and 21.4% benefit regarding recurrence; BCG add 22.4% benefit. The progression rate in group A are: 0%, 12.5%, 29%. The global progression is 17.2%. In the group B, the progression rate is: 0%, 6.8%, 17%. The global progression is 11.5%.
Conclusions: The study indicated a significant benefit in favor of the adjuvant instillational treatment group, reducing the percent of tumor recurrence from 44.4% to 29.8% (difference is 14.6%); regarding the progression rate the benefit is 5.7% (from 17.2% to 11.5%).

C124

NK cell immunohistochemistry – a new prognostic marker of bladder cancer recurrence?

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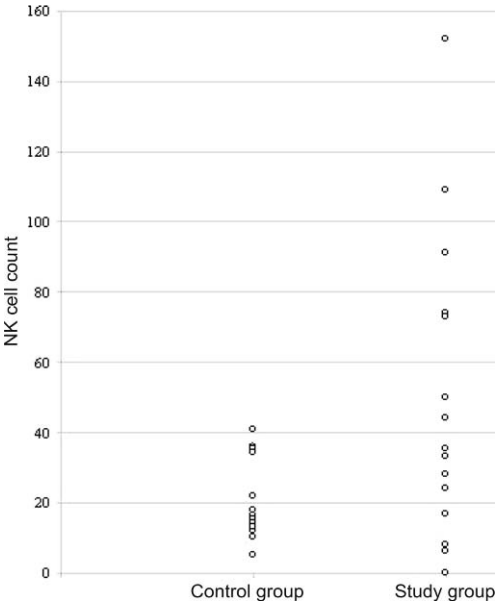
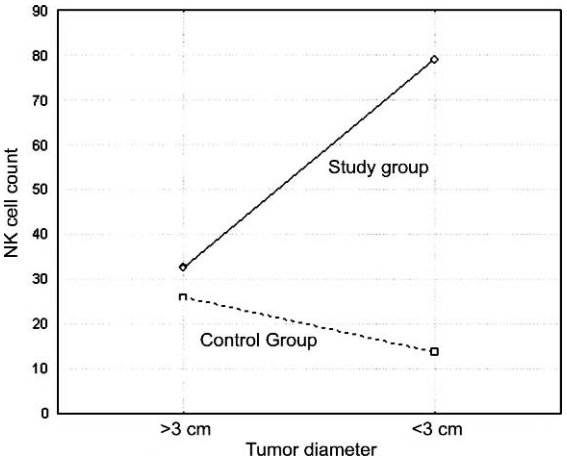
Introduction and Objectives: The aim of the present study was to evaulate the prognostic value of the local NK cell count in patients with recurrent non-muscle invasive bladder cancer.
Material and Methods: The archival paraffin-embedded primary tumor specimens were derived from retrospectively selected patients who were treated between 1996 and 2001 for bladder cancer. Primary tumors were staged according to AJCC-TNM classification from 2002, and graded according to the World Health Organization classification system from 1973. Patients with non-muscle invasive bladder cancer were enrolled in this study, those with carcinoma in situ and T1GIII were excluded because of possible associated local inflammatory reaction and malignant potential. Study group consisted of 46 patients who developed recurrent disease during first two postoperative year. Control group consisted of 27 patients who did not develop recurrent disease during first two postoperative year. Specimens were assessed immunohistochemically with standard "ABC" technic (monoclonal antibodies CD56 NCL-L-CD56–1B6, "NovoCastra Laboratories"). The frequency of NK cells was expressed as total number, estimated for each tumor by counting the positive NK cells in 10 high-power representative fields (200×). Statistical analysis was done using Kruskal-Wallis test.
Results: Patients with recurrent non-muscle invasive bladder cancer in general have significantly higher ($p < 0.05$) values of stromal NK cell count than the control group. Analysis of the patients with single tumors showed that patients in study group have significantly higher ($p < 0.05$) NK cell count than those of control group and we estimated a clear cut-off value in NK cell count (42 cells) between these groups of patients (graph 1). Patients with smaller tumors (<3 cm) show statistically significant difference ($p < 0.05$) in NK cell count between study and control group (graph 2). There also exists statistically significant difference ($p \ll 0.05$) in stromal NK cell count in patients with clinical stage Ta.
Conclusions: Our results confirm an association of the bladder wall NK cell count in bladder cancer patients with the natural history of disease. Further well-performed, reproducible, large, prospective investigation stratified by clinical parameters such as tumor number and diameter is needed to display true value of this marker in the clinical work-up of bladder cancer patients.



Graph 1. NK cell count in single-tumor patients.



Graph 2. NK cell count in relation to tumor diameter.