Long-Term Follow-Up for Patients Received Low Dose BCG Regimen in T1 Transitional Cell Carcinoma of the Bladder

Introduction and Objectives: BCG has been used for more than 30 years and is currently the most effective agent for non-muscle invasive bladder cancer therapy after transurethral resection. The high-grade T1 lesion treated by transurethral resection alone is reported to progress to muscle invasion in 30% to 50% of the patients. Until now, optimal treatment schedule and optimal dose have not been defined as the toxicity related to BCG therapy is significant. In this study we tried to evaluate the efficacy and toxicity of 60 mg intravesical BCG (Pasteur strain) therapy in patients with T1 transitional cell carcinoma of the bladder.
Materials and Methods: From January 2000 till December 2009, 100 patients with single T1 transitional cell carcinoma (TCC) of the urinary bladder (grade 3 in 33 patients and grade 2 in 67 patients) were treated by complete transurethral resection followed by a 6-weeks course of 60 mg BCG intravesically. Follow-up ranged from 26-120 months.
Results: Twelve patients (12%) exhibited recurrence with muscle invasion after 6-18 months (7 with grade 3 tumors and 5 with grade 2), all were subjected to radical cystectomy and urine diversion. Twenty-nine patients (29%) showed recurrent T1 tumor after 16-45 months (10 with grade 3 tumors and 19 with grade 2) and were treated by TUR-T followed by a second 6-weeks course of 60 mg BCG intravesically. Recurrence index was 0.82/100 patients /month and the median tumor-free period was 20 months. Regarding toxicity; irritative symptoms occurred in 24% of patients, fever in 9%, microscopic hematuria in 14%; which appeared to be significantly low when compared with the rates reported for higher doses of BCG.
Conclusion: Intravesical therapy of 60 mg BCG is effective in prophylaxis against recurrence and progression of T1 TCC of the bladder. Decreasing the dose resulted in reducing the side effects significantly without delay or cessation of therapy.