Abstract:

PURPOSE: Despite an initial adequate response many patients with nonmuscle invasive urothelial cell carcinoma of the bladder eventually have recurrence after intravesical bacillus Calmette-Guerin treatments. We evaluated the efficacy of combined bladder wall hyperthermia and intravesical mitomycin C instillation (thermo-chemotherapy) in cases of recurrence after bacillus Calmette-Guerin.

MATERIALS AND METHODS: A total of 111 patients with recurrent papillary nonmuscle invasive urothelial cell carcinoma of the bladder after previous bacillus Calmette-Guerin treatment underwent complete bladder tumor resection and were referred for prophylactic adjuvant treatment with thermo-chemotherapy. Treatment was received on an outpatient basis weekly for 6 weeks, followed by 6 maintenance sessions at 4 to 6-week intervals. Each treatment included 2, 30-minute cycles of 20 mg mitomycin C and bladder wall hyperthermia to 42C +/- 2C. Cystoscopy and urine cytology were performed after the completion of induction treatment and every 3 months thereafter.

RESULTS: The Kaplan-Meier estimated disease-free survival rate was 85% and 56% after 1 and 2 years, respectively. No maintenance treatment was associated with decreased efficacy, that is the recurrence rate was 61% at 2 years vs 39% in those with maintenance treatments (p = 0.01). The progression rate was 3%.

CONCLUSIONS: Thermo-chemotherapy may be effective for papillary nonmuscle invasive urothelial cell carcinoma of the bladder that recurs after BCG treatment without increasing the risk of tumor progression. Maintenance therapy is important and improves the outcome.