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COMBINED THERMO-CHEMOTHERAPY FOR RECURRENT BLADDER CANCER AFTER BACILLUS CALMETTE-GUERIN

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

Materials and methods: A total of 111 patients with recurrent papillary nonmuscle invasive urothelial carcinoma of the bladder after previous bacillus Calmette-Guérin treatment underwent complete bladder tumor resection and were referred to prophylactic (adjuvant) treatment with thermo-chemotherapy.

Treatment was received on an outpatient basis weekly for 6 weeks, followed by 6 maintenance sessions at 4-6 week intervals. Each treatment included 2 30 minute cycles of 20mg of mitomycin-C and bladder hyperthermia to a mean \pm SD $42\pm 2^{\circ}\text{C}$.

Cystoscopy and urine cytology were performed after the completion of the induction treatment, and every 6 months thereafter.

Results: The Kaplan-Meier estimated disease free survival rates were 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 ($p=0.01$). 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 for tumor progression. Maintenance therapy is important and improves outcome.