Advantages of a New Diagnostic and Treatment Approach in Cases of Large Non-Muscle Invasive Bladder Tumors: NBI Cystoscopy and Bipolar Plasma Vaporization

Introduction and Objectives: The trial evaluated the diagnostic accuracy, perioperative and follow-up results of narrow band imaging (NBI) cystoscopy associated with bipolar plasma vaporization (BPV) in cases of large non-muscle invasive bladder tumors (NMIBT).
Materials and Methods: A total of 110 patients with bladder tumors over 3 cm were included in the trial. WLC and NBI cystoscopy followed by BPV were performed in every case under spinal anesthesia. NMIBT patients underwent standard Re-TUR 4 weeks after the initial procedure, one year BCG intravesical therapy and follow-up standard cystoscopy at 3, 6, 9 and 12 months.
Results: The CIS (94.6% versus 67.6%), pTa (93% versus 82.4%) and overall NMIBT (94.9% versus 84.3%) tumors' detection were significantly improved for NBI cystoscopy by comparison to standard WLC. BPV provided satisfactory obturator nerve stimulation (3.2%) and bladder wall perforation (1.1%) rates, as well as reduced mean hemoglobin drop (0.2 g/dl), catheterization period (47.2 hours) and hospital stay (2.9 days). The overall (6.3%) and primary site (4.2%) residual tumors' rates at Re-TUR were decreased for the NBI-BPV approach. The overall NMIBT (7.9%) and other site (3.4%) one year' recurrence rates were also reduced in this series of patients.
Conclusions: NBI cystoscopy significantly improved the diagnostic accuracy in cases of large NMIBT, while BPV emphasized superior surgical efficacy and safety. This combined technique provided a low residual tumors' rate at Re-TUR due to fewer primary site recurrences as well as a reduced one year recurrence rate subsequent to fewer other site recurrences.