Bipolar Plasma Vaporization versus Standard TUR in Secondary Bladder Neck Sclerosis: A Medium Term Comparison

Introduction and Objectives: This medium term trial aimed to assess the efficiency, safety and postoperative results of the bipolar plasma vaporization (BPV) by comparison to monopolar transurethral resection (TUR) in cases of secondary bladder neck sclerosis (BNS).
Materials and Methods: A total of 60 patients with BNS secondary to TURP (41 cases), open prostatectomy for BPH (14 cases) and radical prostatectomy for prostate cancer (5 cases) were enrolled in the trial. The inclusion criteria consisted of Q_{max} < 10 ml/s and IPSS >19. All patients were evaluated preoperatively and at 1, 3, 6 and 12 months after surgery by International Prostate Symptom Score (IPSS), quality of life score (QoL) and maximum flow rate (Q_{max}).
Results: The mean operation time, catheterization period and hospital stay were significantly reduced in the BPV series (9.2 versus 17.4 minutes, 18 versus 46.5 hours and 34.5 versus 73 hours). Capsular perforation only occurred in 2 cases of the TUR study arm, while the rate of irritative symptoms was similar in the 2 series (16.7% versus 13.3%). The 1, 3, 6 and 12 months' follow-up emphasized superior parameters for the BPV group by comparison to the TUR series in terms of IPSS (3.4 versus 6.3, 3.6 versus 6.5, 3.7 versus 6.8 and 3.7 versus 7.1, respectively) and Q_{max} (23.8 versus 21.1 ml/s, 23.7 versus 20.6 ml/s, 23.0 versus 20.7 ml/s and 23.4 versus 20.3 ml/s). At the same time intervals, QoL was also significantly improved in the BPV arm (1.2 versus 1.4, 1.4 versus 1.6, 1.4 versus 1.7 and 1.3 versus 1.7). Only 2 patients of the TUR group required re-treatment.
Conclusions: BPV constitutes a valuable endoscopic treatment alternative for secondary BNS. The method emphasized superior efficacy, a satisfactory safety profile and significantly improved short-term follow-up parameters by comparison to standard TUR.