Bipolar Plasma Enucleation of the Prostate: An Innovative Technique in Large BPH Endoscopic Treatment

Introduction and Objectives: The present trial aimed to evaluate a new endoscopic treatment alternative for large benign prostatic hyperplasia (BPH) cases, the bipolar plasma enucleation of the prostate (BPEP), in terms of surgical efficiency and safety as well as short term postoperative results.
Materials and Methods: A total of 30 patients with prostates larger than 80 ml were included in the study. All cases were investigated preoperatively and at 1, 3, 6 and 12 months after surgery by international prostate symptoms score (IPSS), quality of life score (QoL), maximum flow rate (Q_{max}) and abdominal and transrectal ultrasound.
Results: The preoperative parameters included 137 ml for prostate volume, 23.5 for IPSS, 4.3 for QoL, 7.2 ml/s for Q_{max} and 215 ml for the post-voiding residual urinary volume (RV). All procedures were successfully performed under spinal anesthesia. The enucleation and morcellation times were 69.8 minutes and 18.5 minutes, while the morcellated tissue weight was 77 grams. The mean hemoglobin drop in this series was 0.8 g/dl and the mean catheterization period and hospital stay were 26.5 hours and 2.3 days. There were no cases of prostatic capsule perforation, blood transfusion, bladder wall injury secondary to morcellation, re-intervention or clot retention. The rate of early irritative symptoms was 10%. At 1, 3, 6 and 12 months, significant improvements were determined concerning the IPSS (5.3, 4.8, 4.9 and 5.1), QoL (1.2, 1.1, 1.2 and 1.3), Q_{max} (25.9, 25.1, 24.6 and 24.9 ml/s) and RV (34, 25, 22 and 29 ml).
Conclusions: BPEP may represent a promising treatment modality in large BPH cases, characterized by good surgical efficacy, reduced morbidity, fast postoperative recovery and satisfactory follow-up parameters.