Modified “En Bloc” Bipolar Plasma Enucleation of Prostate: Our Technique for Treatment of Obstructive Benign Prostatic Hyperplasia

Ajay Bhandarkar, MCh

Department of Urology, Sujay Urological Hospital, Alkapuri, India.

E-mail: ajaybhandarkar@hotmail.com

Dipen Patel, MD

Department of Urology, Sujay Urological Hospital, Alkapuri, India.

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Abstract

Introduction and Objectives: Although transurethral resection of prostate has been the gold-standard intervention, in recent times, endoscopic enucleation of prostate (EEP) has been introduced as safe and effective procedure for the treatment of benign prostatic enlargement. Enucleation of the adenoma can be done by any energy source such as Holmium-YAG laser, Thulium laser, or plasmakinetic energy. The acronym EEP is a coding for common ground of endoscopic enucleation techniques.¹ We are presenting our modification of single-lobe technique of bipolar plasma enucleation of prostate (BPEP), which is simplified in four different steps.

Materials and Patients: Thirty-nine patients were included in our study of BEEP between December 2016 and June 2018. Average volume of prostate in our study was 58.6 cc. All patients were evaluated preoperatively by International Prostate Symptom Score (IPSS), uroflowmetry, sonography of prostate and urinary tract for prostate volume and post void residue estimation, prostate-specific antigen, and quality of life score. Endoscopic enucleation was done by 26F continuous flow resectoscope and Button electrode with high-frequency bipolar generator (Olympus Medical Systems). Modified technique of single-lobe enucleation was followed as published by our group.² Tissue morcellator (Richard Wolf) was used for removal of enucleated adenoma from the bladder. Postprocedure follow-up was done at 3, 6, and 12 months.

Results: Mean enucleation time for the prostate was 33.33 minutes (10–80 minutes) and estimated blood loss during procedure was 71.81 mL (16–350 mL). No patient in our study required blood transfusions. Mean catheterization time was 49.78 hours and mean hospital stay was 73.72 hours. Clavien Grade 1 complication was seen in four patients, one patient required cystoscopy and clot evacuation. Two patients had stress urinary incontinence for 3 months. Significant improvement in IPSS and Qmax was seen on follow-up at 3, 6, and 12 months.

Conclusions: Our technique of BPEP is a simplified hybrid version of “en bloc” enucleation of adenoma in the treatment of obstructive BPH. However, long-term randomized trials are required for establishing any procedure. This technique of single-lobe enucleation with button electrode and bipolar energy can be useful for overcoming the learning curve of EEP.

No competing financial interests exist.

Runtime of video: 8 mins 35 secs

Keywords: benign prostatic hyperplasia, bipolar endoscopic enucleation of prostate, plasmakinetic energy, endoscopic enucleation of prostate, prostatic surgery

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