INTRODUCTION AND OBJECTIVE: A prospective study was conducted to evaluate the efficacy and safety of bipolar plasma vaporization of the prostate relative to 980 nm LASER vaporization of the prostate.

METHODS: Between July 2006 and July 2007, a total of 104 men were enrolled in a prospective, randomized trial. A total of 53 men underwent prostate plasma vaporization (GrA) and 51 underwent prostate LASER vaporization (GrB). Patients were assessed at baseline and during the follow-up using the International Prostate Symptom Score (IPSS), quality of life score, maximum urinary flow rate (Qmax) and post-void residual urine. The operative time, postoperative irrigation period and catheter-removal time, preoperative and postoperative serum hemoglobin and sodium were also recorded. The re-epitelization of the prostate fossa was assessed by cystoscopy at 1 and 3 months postoperatively. Mean follow-up was 12 months. The two groups were similar in terms of preoperative parameters: mean age, mean preoperative TRUS volume, mean IPSS score, mean Q1, mean Qmax, mean post-void residual volumes.

RESULTS: The mean operative time for plasma vaporization (31.68 ± 7.12 min.) was significantly shorter than that of LASER vaporization (58.06 ± 8.18 min.) (P < 0.001). Change in serum hemoglobin and sodium, postoperative irrigation period and mean catheter-removal time were similar in the two groups. At twelve months, the mean Qmax decreased to 17.32 ± 3.53 ml/s (256.9%) in GrA and to 15.88 ± 2.96 ml/s (232.8%) in GrB (p=0.0261). The post-void residual volume was (15.74 ± 4.58 ml vs. 17.39 ± 7.15 ml) (p=0.1660). The mean IPSS had decrease to 4.92 ± 2.14 (77.6%) for the plasma vaporization group and to 8.96 ± 3.73 (60.1%) for the LASER group (p<0.001). The plasma vaporization group had a significantly better improvement of the Q1 (2.38 ± 1.13) compared with 3.2 ± 1.52 in LASER treated group (p=0.0024). Delayed re-epitelization of the prostate fossa was recorded at patients with prolonged irritative symptoms, most of them belong to the LASER vaporization group (7.55% vs. 19.61%, p=0.0767).

CONCLUSIONS: The two surgical procedures are highly effective in experienced hands. Plasma vaporization is safe and advantageous because of the short operating time, reduced postoperative irritative symptoms and consequently a better quality of life. The delayed reepitelization of the prostate fossa is correlated with persistent irritative symptoms recorded more frequently after LASER vaporization.

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TRANSURETHAL LASER ENucleATION OF THE PROSTATE (TLEP) - 2-YEAR EXPERIENCE
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INTRODUCTION AND OBJECTIVE: Photoselective vaporization of the prostate (PVP) is a safe, effective procedure for the treatment of benign prostatic hypertrophy (BPH) and its results are durable. In this video, we demonstrate a new technique for PVP as well as long-term data on its safety and efficacy.

METHODS: This technique is essentially a hybrid between a TURP and a holmium laser enucleation of the prostate. First an incision is made at the 6 o’clock position bisecting the median lobe down to the level of the trigone. Next an incision is created lateral to the median lobe, lateral to the uretic orifices. The intervening tissue is vaporized down to a narrow core which is then separated from the prostate bed and pushed into the bladder. To complete resection of the lateral lobes, resection is done at the 11 and 1 o’clock positions. Finally apical tissue is vaporized. We analyzed out 2-year data for this procedure.

RESULTS: 276 patients underwent the procedure with minimal complications. No blood transfusions were required. Mean improvement in IPSS was 64.25% and mean improvement in maximum flow rate was 74.46% over 2 years.

CONCLUSIONS: The TLEP is a safe, effective treatment for BPH with durable improvement in IPSS and maximum flow rate.

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