

in order to identify the dissection plane; then, we carried two incisions on in depth until circular fibers of the bladder neck were visible at the 5 and 7 o'clock positions proximally at the bladder neck in the case of the three-lobe technique or only on one side in the case of the two-lobe technique. The incisions were joined to those proximal to the veru montanum. The key point of our technique was the enucleation of the anterior adenoma from the external urinary sphincter: we spared a portion of adenoma 1 cm proximal to the external sphincter using the mucosal incision between the 10 and 2 o'clock positions. This residual adenoma serves as a cap to protect the external sphincter. Enucleated tissue was then removed by a morcellator.

Results: Mean patients age was 69.1 years. Mean prostate volume was 88 mL (a prostate volume ≥ 60 mL was found in 80.7% of patients) with a mean PSA of 4.42 ng/mL. Preoperative mean values of Qmax and PVR were 11.3 mL/s and 80 mL, respectively. Preoperative IPSS and IIEF-5 scores were 20 and 12. Median operative time was 120 min with 136 kJ of laser energy delivered. Median hemoglobin decrease was 0.7 gr/dL. Seven low-grade (Clavien Dindo I-II) complications were recorded. At 1 month, 34.2% of patients presented UI, 15.8% urge incontinence, 13.2% stress incontinence, and 5.2% mixed incontinence. At 3 months, UI showed a significant improvement, decreasing to 11.8%. At 6 and 12 months, UI was 7.9% and 3.9%, respectively.

Conclusions: Our modified HoLEP technique seems to be safe and effective, allowing significant improvement in the postoperative UI rate.

SC23

Holmium laser enucleation of the prostate with virtual basket tool: faster and better control on bleeding

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Author of the Study: To compare clinical intra and early postoperative outcomes between conventional Holmium laser enucleation of the prostate (HoLEP) and Holmium laser enucleation of the prostate with Virtual Basket tool (VB-HoLEP) to treat benign prostatic hyperplasia (BPH).

Materials and Methods: This prospective randomized study enrolled consecutive patients with BPH to HoLEP (n = 100) or VB-HoLEP (n = 100). All patients were evaluated preoperatively with regards to blood loss, catheterization time, irrigation volume, hospital stay and operative time. At 3, 6 and 12 months after surgery they were also evaluated by International Prostate Symptom Score (IPSS), maximum flow rate (Qmax), and postvoid residual urine volume (PVR).

Results: The patients in each study arm each showed no significant difference in preoperative parameters. Compared with HoLEP, VB-HoLEP had faster operative time (57.33 ± 29.71 vs 42.99 ± 18.51 minutes, $P = 0.04$) and resulted in less hemoglobin decrease (2.54 vs 1.12 g/dL, $P = .003$). HoLEP and VB-HoLEP had same catheterization time (2.2 vs 1.9 days, $P = 0.45$), irrigation volume (33.3 vs 31.7 L, $P = 0.69$), and hospital stay (2.8 vs 2.7 days, $P = 0.21$). During the 12 months of follow-up, the procedures did not demonstrate a significant difference in Qmax, IPSS, PVR, and QOLS.

Conclusions: HoLEP and VB-HoLEP both relieve lower urinary tract symptoms equally, with high efficacy and safety. VB-HoLEP was statistically superior to HoLEP in blood loss and to allow a faster procedure. Catheterization time, irrigation volume, hospital stay and in

operation time showed no differences. However, procedures did not differ significantly in Qmax, IPSS, PVR, and QOLS through 12 months of follow-up.

SC24

Greenlight laser vaporization failure: risk factors from the Italian greenlight laser study group

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Author of the Study: GreenLight laser Photoselective Vaporization of the Prostate (PVP) for Benign Prostatic Obstruction (BPO) is considered an alternative to TURP in men with moderate-to-severe LUTS and a prostate volume of 30–80 mL, in light of their comparable short- and mid-term results. Long-term re-treatment rate and risk factors for treatment failure are still debated.

Materials and Methods: We retrospectively reviewed all cases undergoing standard or anatomical Greenlight Laser in a multi-institutional, prospectively collected database from September 2011 to December 2019 involving 20 Italian centers and collecting data on patients developing LUTS relapse requiring re-intervention (TURP or Greenlight PVP) with a follow-up period of at least 12 months.

Results: Among 885 patients with at least 12 months follow-up, 18 patients with post-operative urethral stricture (2%) were excluded from the analyses. With a median follow-up period of 23 months (IQR 16–32), 35 patients out of 867 (4%) required re-intervention. The median prostate volume of the study population was 60.0 ml (IQR 45.0, 75.5). No statistical differences were found between the two groups in terms of age, use of antiplatelet and anticoagulant medications, LUTS therapy, history of catheterization or retention and intra and peri-operative data. Patients requiring a re-intervention had a prostate volume ≥ 100 cc in 28.6% of cases versus 11.1% ($p = 0.002$). Pre-operative urethral stricture was more frequent in the re-treatment group (17.1% versus 6%, $p = 0.027$). Incidence and type of early complications were similar between the two groups. The three most frequent early complications in the re-treatment and no re-treatment group were burning urination (25.7% and 15.3%), urgency (17.1% and 11.5%) and post-operative urinary retention (14.3% and 8.5%). In the re-treatment group, 22 patients required a surgical endoscopic intervention for de novo lower urinary tract symptoms linked to bladder neck or prostatic fossa contracture, with an overall incidence in the study population of 2.5%. The remaining 13 patients in the re-treatment group underwent TURP or Greenlight PVP for LUTS relapse (1.5%). At the univariate and multivariate logistic regression models only prostate volume ≥ 100 ($p = 0.003$ and $p = 0.010$), pre-operative urethral stricture ($p = 0.013$ and $p = 0.036$) and occurrence of early complications ($p = 0.008$ and $p = 0.024$) correlated with re-intervention.

Conclusions: In our database of 867 consecutive patients undergoing PVP with mid/long-term follow-up, only 4% required re-intervention, of these 62.9% was treated for bladder neck or prostatic fossa contracture with endoscopic revision, while only 37.1% needed a TURP or re-PVP for LUTS relapse after the first PVP surgery. These data are in line with TURP series. In our patients, prostate volume ≥ 100 ml, pre-operative urethral stricture and early complications were linked to higher risk of late re-intervention.