

## **Enucleation of the Prostate with Diode Laser: A Novel Technique Differs from HoLEP**

**Introduction and Objective:** We present our novel technique of enucleation of the prostate combined with resectoscope and diode laser, and this technique far differs from HoLEP.

**Materials and Methods:** There were 35 patients treated due to symptomatic BPH from September to December 2011. One of them was underwent conventional TURP 6 years ago. The instruments we used included continuous-flow resectoscope with laser working element (Karl Storz), 980nm diode laser and Versacut morcellator (Lumenis). The surgical procedure includes: Step 1- the surgical capsule plane at the proximal lateral side of verumontanum was identified using blunt dissection horizontally with oblique beak of resectoscope sheath and the plan was developed retrogradely under median lobe. Step 2- the median lobe was isolated and peeled off the surgical capsule floor. Step 3- the left lobe was enucleated from the surgical capsule mechanically in retrograde and anticlockwise fashion and laser was employed to offer coagulation and precise cutting. The same procedure was underwent for right lobe. Step 4- the enucleated adenoma was morcellated following carefully hemostasis. Step 5-Inspection of the prostatic fossa and coagulation. All patients were followed up for 3-6 months with flowmetry and IPSS.

**Results:** The mean age was 71.5 and the mean prostate volume was 53.4 (41-80) ml. The mean operative duration was 35(20-50)min. The mean blood loss was 70 (50-120) ml. There were no major complications. The catheter was removed within 24 hours after the operation in all cases. The mean follow-up period was 4.2 months. The improvement in the IPSS ( $21.8 \pm 3.7$  vs.  $5.5 \pm 1.2$ ) and in the Qmax ( $6.0 \pm 1.5$  vs.  $21.4 \pm 3.6$ ) was achieved.

**Conclusion:** With the great hemostasis characteristic, 980nm diode laser is optimal candidate for enucleation of the prostate. The enucleation technique we used is mechanically dissection with resectoscope and it is quite different from 'sharp' HoLEP technique. The new technique is more likely to mimic the conventional open prostatectomy and it comes up with satisfactory short-term results.