The Effect of Prostate Size on the Short Term Outcome of Thulium:YAG (Revolix^{r}) Vaporesection or Vapoenucleation for the Treatment of Benign Prostatic Hyperplasia

Introduction and Objective: Thulium:YAG (Tm:YAG) laser operates at a wavelength of 2 um and is delivered as a continuous wave. It offers a rapid ablation capacity and hemostatic properties of prostate tissue. We evaluated the effect of prostate size on the outcome of Tm:YAG for the treatment of symptomatic BPH.
Material and Methods: A total of 313 men underwent Tm:YAG for BPH from March 2010 to December 2011. All patients were classified into three groups according to their prostate volume (group A, ≤60 cc: n=241; group B, 60~99cc: n=53; group C, ≥100: n=19). All patients underwent a baseline evaluation including international prostate symptom score (IPSS), prostate volume and PSA as well as urodynamic evaluation. Preoperative and postoperative outcome (at 6 weeks) as well as short term adverse events were assessed.
Results: The mean prostate size was 34.7, 74.7 and 111.8 ml for groups A, B and C, respectively. Group C showed a significant higher surgical time (33.0±24.6, 68.7±30.6 and 104.4±33.5 min, P<0.001). The average of 4.3, 14.3, and 20.6 cc of tissue were retrieved in each groups. The prostate sizes estimated at 6 weeks postoperatively was 19.6±5.8, 38.9±6.7, and 56.3±7.5 ml, respectively. There were no significant differences in improvement of IPSS scores, Qmax and PVR among the three groups. Only 2 patients needed a blood transfusion and no TUR syndrome was observed in all groups. Perioperative complications were almost evenly distributed among the three groups. Re-catherization after initial voiding trial was necessary in 2 patients. Catheterization time and hospital days showed no significant differences among the three groups.
Conclusions: Tm:YAG prostatectomy is a safe and effective procedure for treating symptomatic BPH independent of prostate size with little perioperative morbidity. Although the long-term durability of this new method has not been confirmed, it may be an important alternative in the treatment of BPH.