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COMPARISON OF SHORT-TERM OUTCOMES BETWEEN TRANSURETHRAL RESECTION OF PROSTATE (TURP) AND THULIUM:YAG (REVOLIXR) VAPORESECTION FOR THE TREATMENT OF BENIGN PROSTATIC HYPERPLASIA IN KOREA.

Hypothesis / aims of study

Thulium:YAG (Tm:YAG) laser operates at a wavelength of 2 um and is delivered as a continuous wave (1). It offers a rapid ablation capacity and hemostatic properties of prostate tissue (2,3). We compared the initial efficacy and side effects between TURP and Tm:YAG for the treatment of symptomatic BPH.

Study design, materials and methods

A total of 281 men underwent TURP (71) or Tm:YAG (210) for BPH from March 2010 to December 2011. 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 58.3±22.0 ml and 51.7±18.4 ml in TURP and Tm:YAG groups, respectively, without significant difference between the two groups. TURP group showed a significant higher surgical time (73.1±29.6 min, 61.4±31.0 min, P=0.009). Although the resected volume of tissue of the Tm:YAG group was less than that of the TURP group (18.9±16.2 ml, 6.3±5.7 ml, P<0.001), there was no significant difference in prostate sizes estimated at 6 weeks postoperatively between the two groups (35.1±13.3 ml vs. 38.9±15.9 ml, P=0.128). Tm:YAG group was associated with a significantly shorter catheterization time (4.3±1.7 days vs. 2.5±0.7 days), and hospital day (6.1±2.6 vs. 3.7±0.6). Hemoglobin and serum sodium decreases were significantly greater in the TURP group (1.7±1.4 g/dl vs. 0.8±0.6 g/dl and 6.2±3.4mmol/L vs. 1.0±1.2mmol/L). There were no significant differences in improvement of IPSS score, and urodynamic findings between the two groups. 2 patients needed a blood transfusion and no TUR syndrome was observed in the Tm:YAG, whereas 3 patients experienced transfusion and TUR syndrome in the TURP group.

Interpretation of results

Thulium:YAG laser operation seems to be a safe and durable procedure and by all means to be comparable to TURP in quickly relieving bladder outlet obstruction symptoms, even though the long term durability of this new method has not been confirmed.

Concluding message

Tm:YAG prostatectomy offers excellent hemostasis with high efficacy, with little perioperative morbidity. It may be an important alternative in the treatment of BPH.

References

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Disclosures

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