

Comparison between Monopolar Trans-Urethral Resection of Prostate and Thulium Laser Enucleation of the Prostate: A Single Institution Experience

Introduction and Objective: In our Institution we made a comparison between two different endoscopic surgical treatments for benign prostatic obstruction. We compared monopolar Trans-Urethral Resection of Prostate (TURP) with Thulium Laser Enucleation of the Prostate (ThuLEP); we reported preoperative, intraoperative and postoperative parameters.

Materials and Methods: From September 2011 to February 2012 we reviewed 30 consecutive patients who underwent ThuLEP and compared them to 30 match-paired patients treated with a standard monopolar TURP approach. The patients were matched for age, prostate specific antigen, prostatic volume and urinary flow parameters. Preoperative, perioperative and postoperative data, including International Prostate Symptom Score (IPSS) and flowmetry measured after 7 and 30 days, complications, time to catheter removal were analyzed between the two groups.

Results: The two groups were statistically similar according to age, prostate specific antigen, prostatic volume and urinary flow parameters. Operative time was lower for ThuLEP (mean time 42.4 minutes) compared to TURP (61.8 minutes). Mean preoperative IPSS was 14 for ThuLEP and 19.5 for TURP. We observed a quicker improvement after ThuLEP (IPSS after 7 days was 8.2 for ThuLEP and 16.5 for TURP). IPSS after 30 days was 8.0 for ThuLEP and 8.7 for TURP. Flow parameters improved significantly after both procedures, but ThuLEP showed a faster increase in fact after 7 days we observed a mean increase of 13.8 ml/sec (preoperative mean value 7.4 ml/sec, postoperative mean value 20.3 ml/sec). Patients who underwent ThuLEP required no blood transfusions, while one patient performing TURP had transfusion. We did not observe any TURP-Syndrome. This complication is virtually impossible during ThuLEP because of saline irrigation. ThuLEP patients had 2 hours bladder irrigation in 40% of total cases (60% had no irrigation) while 95% of TURP patients had bladder continuous wash out (mean time 24 hours). Time to catheter removal had a mean of 24 hours for ThuLEP and 48 hours for TURP.

Conclusions: We observed that ThuLEP is equivalent to the actual gold standard procedure (TURP) considering operative time, complications and postoperative irritative symptoms. Besides this ThuLEP shows better outcomes considering flow parameters improvement, length of bladder catheterization and need for bladder continuous washout.