

Thulium Laser Prostatectomy versus Laparoscopic Retropubic Simple Prostatectomy in Patient with Voluminous Benign Prostatic Hyperplasia (BPH)

Introduction and Objective: Thulium laser prostatectomy is a transurethral procedure for BPH and it can be applied to symptomatic large size prostate. We report an efficacy and effectiveness of thulium laser prostatectomy comparing with laparoscopic retropubic simple prostatectomy in larger than 75gm symptomatic BPH.

Materials and Methods: From March 2008 to February 2011, we analyzed and compared the medical records of 12 patients who underwent thulium laser prostatectomy with 12 patients, who underwent laparoscopic retropubic simple prostatectomy retrospectively. The subjects were limited to the patients who satisfied the following conditions: the prostate volume was at least 75 g, acute urinary retention repeatedly occurred or the maximal flow rate (Q_{max}) was at most 10ml/sec; International Prostate Symptom Score (IPSS) was at least 12. Thulium laser prostatectomy was done by dissecting whole prostatic adenoma and vaporesction of it using a laser fiber without morcellation. Laparoscopic retropubic simple prostatectomy was performed by extraperitoneal approach. Preoperative and postoperative parameters and complications were analyzed, retrospectively.

Results: Thulium laser prostatectomy showed better results than laparoscopic retropubic simple prostatectomy, in terms of catheterization duration (2.8 ± 0.8 days vs. 5.6 ± 1.3 days, $p < 0.00001$), hospital stay (3.8 ± 1.0 days vs. 6.5 ± 1.2 days, $p < 0.005$), estimated blood loss (101.6 ± 42.2 ml vs. 366.7 ± 210.3 ml, $p < 0.000001$), operation time (129.2 ± 24.4 vs. 185.6 ± 51.3 min, $p < 0.005$), and complication (1 incontinence vs. 4 incontinence). Average prostate volume showed no significant difference (107.0 ± 23.3 cc vs. 109.2 ± 28.5 cc, $p > 0.05$). Subjective symptom score and parameters of uroflowmetry showed significant improvement, but no differences between two procedures.

Conclusions: Thulium laser prostatectomy shows good efficacy and effectiveness in voluminous BPH patient, and is enough to replace the laparoscopic or the open simple prostatectomy.