Thulium laser versus standard transurethral resection of the prostate: a randomized prospective trial.

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Abstract

OBJECTIVE: Thulium laser resection of the prostate-tangerine technique (TmLRP-TT) is a transurethral procedure that uses thulium laser fiber to dissect whole prostatic lobes off the surgical capsule, similar to peeling a tangerine. To our knowledge we report the first prospective, randomized study comparing TmLRP-TT and standard TURP for symptomatic BPH. METHODS: From November 2004 to December 2005, 100 consecutive BPH patients were randomized for surgical treatment with TmLRP-TT (n=52) or TURP (n=48). All patients were preoperatively assessed with subjective symptoms score, International Index of Erectile Function questionnaire, and complete urodynamic evaluation. Preoperative and perioperative parameters at 1-, 6-, and 12-mo follow-up were also evaluated. All complications were recorded. RESULTS: TmLRP-TT was significantly superior to TURP in terms of catheterization time (45.7+/−25.8h vs. 87.4+/−33.8h, p<0.0001), hospital stay (115.1+/−25.5h vs. 161.1+/−33.8h, p<0.0001), and drop in hemoglobin (0.92+/−0.82 g/dl vs. 1.46+/−0.65 g/dl, p<0.001), whereas it required equivalent time to perform (46.3+/−16.2 vs. 50.4+/−20.7 min, p>0.05). TmLRP-TT and TURP resulted in a significant improvement from baseline in terms of subjective symptoms scoring and urodynamic finding, but no significant difference was found between the two groups. Late complications were also comparable. CONCLUSIONS: TmLRP-TT is an almost bloodless procedure with high efficacy and little perioperative morbidity. TmLRP-TT is superior to TURP in safety and is as efficacious as TURP in 1-yr follow-up. It is a promising technology in the clinical practice field.