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Thulium laser enucleation of the prostate versus transvesical open enucleation for prostate adenoma: a randomized prospective trial.

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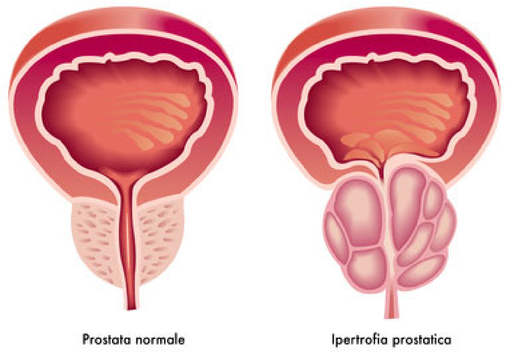
INTRODUCTION & OBJECTIVE

Prostate adenomas greater than 80 ml have traditionally been treated with open prostatectomy or transurethral resection by skilled resectionists. This procedure may involve considerable blood loss, morbidity, prolonged hospital stay and recovery time. To our knowledge we report the first prospective, randomized study comparing transurethral Thulium laser enucleation (ThuLep) of the prostate to open prostatectomy for the surgical management of large prostate adenomas.

METHODS

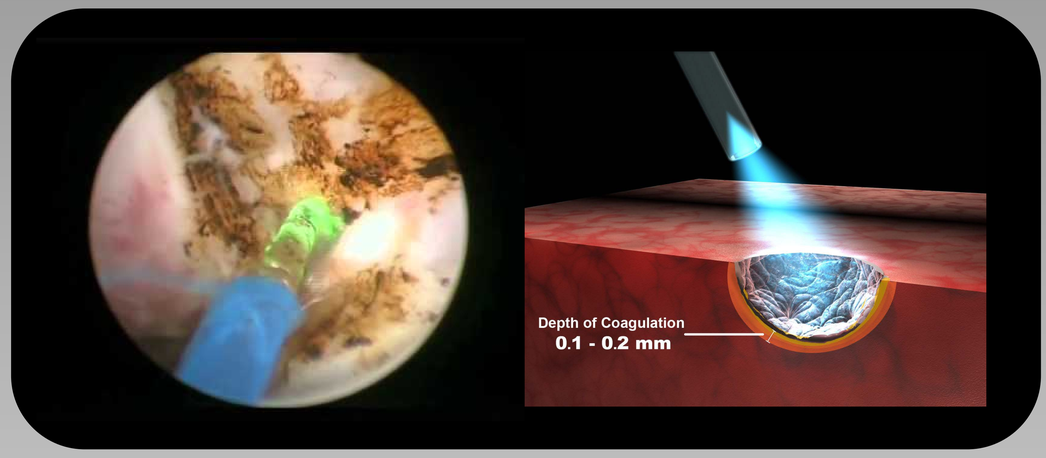
A total of 61 obstructed patients with a prostate larger than 80 ml on transrectal ultrasound undergo ThuLep or open prostatectomy.

All patients were assessed preoperatively and postoperatively. Patient baseline characteristics, perioperative data and postoperative outcome were compared. All complications were noted.



RESULTS

31 patients undergo to ThuLep and 30 to open prostatectomy. Mean patient age is 67 in the ThuLep group and 72 in the open adenomectomy group. Mean preoperatory transrectal adenoma volume is 108 ml and 115 ml respectively. Mean Hemoglobin loss was significantly less ($p<0,05$), and catheterization time ($p<0,05$) and hospital stay ($p<0,05$) were significantly shorter in the Thulep group. Adverse events ($p<0,05$) were more frequent in the open prostatectomy group such as prolonged haematuria, surgical infection, fever and visual scale pain. None of the Thulium group patients needed blood transfusions in contrast to 6 patients (20%) in the prostatectomy group.



CONCLUSIONS

Thulium laser is a new surgical laser, with tunable wavelength. It may have several advantages over the other lasers, including improved spatial beam quality, more precise tissue incision, and operation in continuous-wave/pulsed modes. Thulium laser has been proved capable of rapid vaporization and coagulation of prostate tissue. These two characteristics are at the basis of the endoscopical use to enucleate obstructing prostatic tissue in a relatively bloodless manner.
ThuLep and open prostatectomy are equally effective procedures for removal of large prostatic adenomas. ThuLep resulted in significantly less perioperative morbidity and may become the endourological alternative to open prostatectomy.