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GREEN LIGHT HPS 120 W LASER THERAPY FOR THE TREATMENT OF BENIGN PROSTATIC HYPERPLASIA WITH URODINAMICALLY PROVEN BLADDER OUTPUT OBSTRUCTION: ACHIEVING GOOD CLINICAL RESULTS WITHIN LEARNING CURVE.

Hypothesis / aims of study
Among all available surgical therapies for benign prostatic hyperplasia (BPH), laser therapy still represents a novelty in many centres. The present work is a prospective analysis of the experience in our centre after the first 50 treated patients with urodynamic diagnosis of bladder outlet obstruction (BOO) with 12 week follow-up. The aim of our study is to demonstrate it is possible to achieve good clinical results within learning curve experience with photoselective vaporization of the prostate (PVP) based on clinical data from the first 50 cases of patients with urodynamic diagnosis of BOO treated at our centre.

Study design, materials and methods
A previously ethical committee approved study protocol included consecutive patients with BPH and urodynamic diagnosis of BOO with or without detrusor overactivity, with no previous surgical therapy for BPH. Informed consent from all patients was obtained. Age ranged from 53 to 85 years, mean age 68 years. The main inclusion criterion was urodynamic diagnosis of BOO. Twenty-one patients had detrusor overactivity. Twelve patients were on anticoagulant therapy. None had urge incontinence. Prostatic volume ranged from 33 to 250 mL, mean volume 71.7 mL. The following parameters were measured at baseline and then at 12 weeks: prostate volume, Qmax, PVR, and IPSS with QoL index. Complications occurring perioperatively and postoperatively up to 12 weeks were recorded. Fifty five patients underwent PVP using Green Light HPS 120 W laser (American Medical Systems, USA)**,** from march to november 2010. Procedures were performed by two AMS certified urologists.

Results
Fifty patients underwent PVP. Mean vaporization time was 36 min with mean energy use of 181744 J. No intraoperative complications were recorded. Postoperative complications included one case of immediate post operative bleeding requiring transfusion of two blood units and one case of hypogastric pain simulating acute urine retention which on ultrasonography demonstrated to be a small retropubic pericapsular leak that resumed completely after removal of catheter on day three . Follow-up data at 12 weeks was available for all patients. Complications at 12 wk follow-up were as follows: 3 patients referred isolated episodes of urge incontinence with signs of improvement, 2 patients referred retrograde ejaculation. Mean IPSS changes: baseline: 23.68, 12 wk 6.1. QoL index at 12 weeks was reported with most of patients reporting as “fairly satisfied”, “satisfied” or “very satisfied” (n=45/50), 3 patients reported as “so-so/unchanged” (3/50) and 2 patients reported as “not satisfied” (2/50). Mean Qmax changes: baseline 6.14 ml/s, 12 wk 18.15 ml/s. Mean changes in PVR: baseline 143.17 mL, 12 wk 32 patients <50 mL,13 patients 50-100 mL, 5 patients 100-150 mL. Mean prostate volume changes: baseline 98.7 cc, 12 wk 44.6 cc. Mean hospitalisation time was 1.7 days for the first four months and then decreased to 24 hours. Mean catheterisation time was 1.4 days (range 1-3 days), then 13 hours (range 7-26 hours) after the fourth month of use of this therapy.

Interpretation of results
As one of the most used surgical treatments of BPH nowadays, Green Light prostatic vaporisation seems to allow physicians help patients meet their expectations in terms of a safe and minimally invasive surgical procedure with short in-patient recovery, short catheterisation time and good functional and subjective results. For the patient on anticoagulant therapy it seems a good alternative. From the low blood transfusion need, low in-hospital complication rate and short hospital stay deriving from a day-surgery setting, one could presume there is potential for cost effectiveness with the use of laser PVP on the long term.

Concluding message
PVP with Green Light HPS 120 W laser yields good clinical and patient-referred results from the initial experiences in the learning curve.

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Comitato Etico, Azienda Ospedaliero Universitaria "Santa Maria della Misericordia" di Udine.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**