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THREE YEARS REVIEW OF 170 PATIENTS TREATED FOR BPH WITH REVOLIX 2 MICRON CONTINUOUS WAVE LASER

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INTRODUCTION: To study the safety and efficacy of a thulium laser (2,013 nm) for transurethral vaporization of benign obstructive prostate tissue (BPH). Since Thulium Laser vaporizes rather than coagulate tissue, the technique offers significant advantages over transurethral resection of prostate (TURP). Holmium procedure (HOLEP) and KTP laser photoselective vaporization of prostate (PVP). The Revolix laser has been specifically designed to vaporize and incise soft vascular and non vascular tissue with good hemostasis and without damage to surrounding structures. The target chromophore is water. It is a continuous wave laser, not a pulsed laser.

METHODS: The thulium laser was used in conjunction with a frontal and lateral devices, engineered to precisely focus laser energy (70W) in order to minimize the risk of incomplete ablation of prostatic tissue. Vaporization of the prostate was performed on small to medium prostates (<35 g), while vaporesction was found to be much faster on large glands. Vaporesction is a protocol whereby the laser is used to vaporize tissue and resect small pieces of prostate-similar to TURP-protocol. The size of the prostate ranged from 20 to 80 grams in the group. A three way catheter is placed and removed 5-7 hours later. Patients are released catheter-free.

RESULTS: A group of 170 consecutive patients who have been treated for BPH using the Revolix laser were reviewed. Patients ranged in age from 45 to 89. 15 patients presented urinary retention, 22 patients were on anticoagulant therapy. PSA t/f, transrectal ultrasound, biopsies if necessary, AUA-6 Symptom score (AUA-SS), Q max flow rate and post-void residual volume (PVR) was performed. Our final results with thulium laser (mean AUA-SS from pre-op 21,9 to post-op 7,9; mean Q max from 0-7,6 to 21,6 ml/sec; PVR from 109,8 to 14,5 ml) are comparable to TURP and PVP results. No patients required additional treatment such as bladder neck incisions, strictures; 8 patients required retreatment with this technique due to insufficient vaporization of prostatic tissue in the first treatment.

CONCLUSION: The thulium laser appears to offer a safe, bloodless, effective and more rapid outpatient surgical procedure. The thulium laser provides immediate reduction of prostatic tissue and consistent TURP-like results. To date the thulium laser treatment results in true disobstruction accompanied by immediate improvement in voiding symptomatology, with minimal postoperative discomfort and a low rate of complications.