

**LBA6**

**HIGH POWER DIODE 980 LASER VAPORISATION OF THE PROSTATE: PRELIMINARY RESULTS OF THE "LIFE" PROCEDURE**

*Ali Erol, Duzce Turkey, Turkey; Kamil Cam\*, Duzce, Turkey; Ali Tekin, Omur Memik, Soner Coban, Yavuz Ozer, Duzce Turkey, Turkey*

**INTRODUCTION AND OBJECTIVE:** Vaporisation techniques utilizing lasers have gained wide acceptance in the management of benign prostate hyperplasia (BPH) as an alternative to transurethral resection of the prostate. High power diode laser at 980 nm wavelength is a promising alternative with faster ablation rate and excellent hemostatic properties as shown in ex-vivo and in-vivo animal models. We prospectively evaluated the vaporisation efficiency of the high power diode laser at 980 nm wavelength as the LIFE (laser induced flow enhancement) procedure in the treatment of bladder outlet obstruction due to BPH, which is the first clinical trial.

**METHODS:** A total of 47 consecutive patients were included in the study. Inclusion criteria were maximal flow rate (Qmax)  $\leq 12$  ml/s with a voided volume of  $\geq 150$  ml, International Prostate Symptom Score (IPSS)  $\geq 12$  and Quality of Life (QoL) score  $\geq 3$ . The patients with a history of neurogenic voiding dysfunction, chronic prostatitis, prostate or bladder cancer were excluded. Preoperative Qmax, postvoid residual urine (PVR), IPSS, QoL, International Index of Erectile Function-5 (IIEF-5) item scores, prostate volume measurements were compared with those obtained at three and six months, respectively. Complications were assessed.

**RESULTS:** The short term (3rd month) evaluation revealed that IPSS significantly decreased from mean  $21.93 \pm 4.88$  to mean  $10.31 \pm 3.79$  ( $p=0.0001$ ). Mean Q max value significantly increased from  $8.87 \pm 2.18$  ml/sn to  $17.51 \pm 4.09$  ml/sn ( $p=0.0001$ ). QoL scores significantly changed when compared to the baseline. All these figures in terms of assessing the efficacy were found to be slightly improved at 6th month. There was no deterioration in erectile function according to the IIEF short form. PVR decreased significantly. The most common postoperative complications were retrograde ejaculation (13/41 pts, 31.7%), and irritative symptoms (11/47 pts, 23.4%) which subsided in two weeks. Late transient bleeding was seen in one patient 4 weeks after the operation.

**CONCLUSIONS:** High power diode laser provided significant improvements in IPSS and Qmax values with a low morbidity rate. The results of this first clinical study of the prostate vaporisation with high power diode laser are therefore encouraging. Further prospective randomised clinical trials are warranted to better establish its role in the treatment of BPH.

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