ABLATION OF THE PROSTATE USING A HIGH POWER DIODE LASER (940 NM, 250 W): CLINICAL DATA WITH 12 MONTHS FOLLOW-UP

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Introduction: The light of diode lasers for the treatment of benign prostatic hyperplasia that operate on wavelengths in the near infrared is absorbed in both hemoglobin and water which leads to good hemostasis.

Purpose: To assess the clinical value of the high power diode laser Dornier Medilas D UroBeam.

Methods: Since June 2008, the Dornier Medilas D UroBeam (Dornier MedTech, Wessling, Germany), operating at 940 nanometers and emitting a maximum power of 250 Watt in cw mode, was applied for treating BPH in consecutive patients. After operation, we saw the patients at 1, 3, 6, and 12 months.

Results: 42 patients have reached 12 months of follow-up so far. Mean age of these patients was 73,1 years; pre-operative TRUS volume: 51,9 ml. 11/42 (26 %) patients suffered from acute urinary retention, 30/42 (71 %) were on alpha-blockers, and 15/42 (36 %) were on anticoagulants when presenting for intervention. 2/42 (5 %) patient experienced peri-operative bleeding. At 12 months, compared to pre-operatively, the mean maximum flow rate increased from 9,8 ml to 19,4 ml; mean IPSS dropped from 19,7 to 7,6; and mean post-void urine volume dropped from 87,1 ml to 26,3 ml.

Conclusions: The treatment of BPH with the high power diode laser in continuous wave mode at 250 W provides good clinical outcome regarding peri-operative bleeding and post-operative IPSS, maximal flow rate and residual urine in the follow-up of 12 mo. Further studies with extended follow-up and patient numbers are needed to confirm these data.