

A Prospective Single Centre Study: Safety and Efficacy of Turis Plasma Vaporization (TURIS-V) for the Treatment of Clinical Obstructing Benign Prostate Hyperplasia

Introduction and Objective: The morbidity of transurethral resection of the prostate necessitates constant attempts of modifications of standard equipment and technique. Recently the TURIS-plasma vaporization (TURIS-V) technique, which uses the Olympus UES-40 Surgmaster generator and 'button' va-po-resection electrode, was introduced in clinical practice. We evaluated our results with Button TURIS-V for the treatment of bladder outlet obstruction (BOO) due to benign prostatic hyperplasia (BPH).

Materials and Methods: Between June 2010 and June 2011, 2 different urologists, performed 44 Trans Urethral Prostate Resections in saline using Olympus Button Electrode for the treatment of BOO due to BPH. Ten of them presented significant cardiovascular co-morbidity (prior stroke or systemic embolism, coronary artery disease or peripheral vascular disease) and did not interrupt antiplatelet therapy. The average age of the patients was 69 yrs (range 52-86 yrs) and medium follow-up 10 months. The preoperative investigation protocol included digital rectal examination, Prostatic Specific Antigen (PSA), International Prostate symptom Score (IPSS), Quality of Life (QOL), urinalysis with urine culture, uroflowmetry with post-voiding residual urinary volume (PVR) and transrectal ultrasonography assessing prostate volume. Before surgery we performed Hbg dosage and we repeat it the day after. Catheter duration, hospital stay and eventual transfusions were also valued. The patients were evaluated every 3 months after surgery using PSA, HB dosage, IPSS, QOL, urinalysis with urine culture, uroflowmetry with PVR and after 6 and 9 months by TRUS we assessed residual prostate volume. All the patients showing during follow-up a reduction of Qmax (< 15 ml/sec) or an increasing of IPPS or RPM (>50 ml), underwent an endoscopic second look.

Results: All patients have completed at least 6 months follow-up. In the table are summarized our results.

	BASELINE	3 MONTH	6 MONTH	9 MONTH	12 MONTH
IPSS	23 +/- 5.7	8.5 +/- 5.6	6.2 +/- 4.5	7.1 +/- 5.2	6.7 +/- 5.5
QOL	4.4 +/- 1.1	1.6 +/- 1.4	1.5 +/- 1.2	1.3 +/- 1.2	1.2 +/- 1.1
IEFF-5	12 +/- 3.0	16 +/- 3.0	16 +/- 3.0	16 +/- 3.0	16 +/- 3.0
Qmax (ml)	4.7 +/- 3.4	21.0 +/- 8.5	20.4 +/- 8.0	20.1 +/- 8.9	19.9 +/- 8.8
PVR (ml)	112 +/- 119	35 +/- 15	15 +/- 5	15 +/- 5	15 +/- 5
Prostate (gr)	38.9 +/- 15.1		14 +/- 4.6		14 +/- 3.8
PSA (ng/ml)	2.6 +/- 1.7	0.7 +/- 0.5	0.5 +/- 0.4	0.5 +/- 0.3	0.5 +/- 0.3

The average weight of tissue resected was 25 gr. The mean operating time was 38 minutes, the median catheterization time was 24 hours and the mean hospital stay was 36 hours. Mean bleeding loss were 0.8 gr/dl. No death during peri or post-operative follow-up. Early Adverse Events (EAs) include dysuria in 22.7% (10pz), urgency in 18.18% (8pz), haematuria in 11.3% (5pz) and AUR with re-catheterization for clots in 13.63% (6pz).

Conclusions: The endoscopic plasma vapo-resection of the prostate in saline (TURIS-V) using Olympus Button electrode for Bladder Outlet Obstruction (BOO) caused by Benign Prostate Hypertrophy (BPH) is a safe technique showing optimal outcomes.