

MICROWAVE TRANSURETHRAL THERMODILATATION THERAPY FOR SYMPTOMATIC BENIGN PROSTATIC HYPERPLASIA: 4-YEAR FOLLOW UP ASIAN EXPERIENCE OF 30 PATIENTS CHOW W.M., UMP



BACKGROUND:

Microwave transurethral ThermoDilatation (TUTD) offers a unique 45-minute, ambulatory outpatient procedure that is well tolerated under local anaesthesia for symptomatic benign prostatic hyperplasia (BPH) by using simultaneous focused microwave heating and pressurized balloon dilatation therapy. About 95% of patient do not require a post-treatment Foley catheter and experience significant and immediate relief of their lower urinary tract symptoms (LUTS). We present our 4-year follow-up clinical data on 30 Asian patients clinical data pertaining to the clinical safety and efficacy of microwave TUTD in Benign Prostatic Hyperplasia.

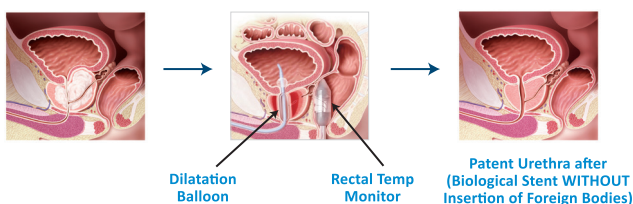
The TUTD device and accessories are presented as follows:



METHODS/MATERIALS:

From August 2018 to December 2019, 30 patients (Age 54-79, mean 62) with LUTS were treated with the microwave TUTD device, PROLIEVE (Medifocus inc.) Their initial IPSS (17- 35, median 24), QOL (4-6, median 5), PSA (0.57-7.7, mean 3.5), prostatic volumes (35- 84cc, mean 54cc), Qmax (1.7-10.5 ml/s, mean 7.5ml/s) and PMRV (50-330ml, mean 190ml) were recorded pre-treatment. The parameters were reassessed at 6 weeks, 3-, and 6-months post-treatment. Subsequent annual follow up were carried out by telephone review of IPSS and QOL.

The procedure is presented as follows:



RESULTS:

2 patients at the end of 36 months reported worsening LUTS that required TURP. Prominent middle lobe enlargement without lateral obstructive enlargement was noted which may account for the recurrence of LUTS. Histopathology confirmed BPH. They were excluded from further data collection for this study.

1 Patient return at 46month with raised PSA, PSA Ratio and PHI. Multiparametric Magnetic Resonance scan of Prostate suggested PIRADS 3 Lesions at periurethral transitional zone. Transperineal Target fusion biopsy was performed with subsequent histopathology confirmed benign prostatic hyperplasia with fibrosis and chronic inflammation only, without high risk malignancy. This patient was also excluded from further data collection for the current study, and PSA follow up at 3 monthly.

27 patients were eligible for final data collection and assessment:

IPSS: 2-23 (median 12) at 6 weeks; 2-16 (median 9) at 3 months; 2-11 (median 6); 2-15 (median 7) at 48 months.

QOL: 2-3 (median 2) at 6 weeks; 2-3 (median 2) at 3 and 6 months; 3-6 (median 4) at 48 months.

Qmax: 3.6-14.9ml/s (mean 10ml/s) at 6 weeks; 8ml/s-15.6 ml/s (median 12.6ml/s); 10.8-17.5ml/s (mean 13.2ml/s) at 6 months.

PMRV: 0-133ml (mean 78ml) at 6 weeks, 0-120ml (median 70ml) at 3 months and 0-95ml (mean 50ml) at 6 months.

Urological complications e.g., clot retention and sepsis were not observed. One patient required temporary post-treatment Foley catheterization for 72 hours. Treatment related retrograde ejaculation or erectile dysfunction has not been reported. The procedure was well tolerated under local anaesthesia. Both voiding and storage symptoms improved.

CONCLUSIONS:

Our 4-year experience with TUTD in 30 Asian patients compares favourably to the clinical outcomes and efficacy of the Caucasian cohort in the USFDA 5-year follow-up post-approval study. We observed lasting post-treatment improvements after 4 years in IPSS, QOL, Qmax and PMRV in majority of 90% of the current cohort of 30 consecutive Asian patients. The recurrence of LUTS in 2 patients with middle lobe enlargement obstruction who required TURP is unfortunate but understandable. We conclude that microwave TUTD for symptomatic BPH remains safe and efficacious in the Asian population and should be offered as a cost effective option. Long-term prospective data collection in a larger patient population remains in progress.

REFERENCE:

Urology Times. Office-Based Microwave Therapy : A First line Treatment for BPH July 2007
Larson BT, et al. Interstitial temperature mapping during ProlieveTUMT. Urology 2006; 68(6): 1206-10