

BPH

WAVEing goodbye to LUTS?

Lower urinary tract symptoms (LUTS) are a common condition in ageing men that is predominantly caused by benign prostatic enlargement. A novel minimally invasive method for the treatment of prostatic enlargement using convective water vapour thermal energy (WAVE) can improve LUTS without affecting erectile or ejaculatory function.

“Earlier studies of WAVE showed significant improvements in LUTS with minimal side effects,” explains Kevin T. McVary, first author of the recently published study. “I took part in this clinical trial because current treatment options for BPH have limitations and I was interested in evaluating whether convective thermal therapy would address some of the unmet needs of our patients.”

In the new study, 197 men aged ≥ 50 years were randomized to receive thermal therapy using the Rezūm® system (NxThera, St. Paul, USA) or a mock procedure in an outpatient setting. Inclusion criteria comprised International Prostate Symptom Score (IPSS) ≥ 13 , maximum flow rate ≤ 15 ml/s and prostate size 30–80 cm³. 136 men underwent the WAVE procedure, in which water vapour at 103°C is generated by radiofrequency heating and then transurethrally injected into the prostate over 9 s per

desired location. The method is thought to enable precise ablation through thermal convection, leading to disruption of cell membranes and cell death, without effects crossing to different prostatic zones or past the prostatic capsule.

Treatment outcome measurement included self-administered questionnaires (covering IPSS, quality of life, sexual function and incontinence), as well as uroflowmetry and pain assessment. No serious adverse events occurred during the procedures that comprised an average of 4.5 WAVE injections each. Pain scores in men receiving the treatment temporarily rose significantly compared with men in the control group; oral sedation was used in the majority of men (around 69%) included in the trial. Following the procedure, 90% and 20% of men received a catheter (at the clinicians’ discretion), and reported resuming normal activities after a median of 4 days and 1 day (according to assessment at 3 months), in the treatment and control group, respectively.

In the treatment group, IPSS had significantly decreased by 3.2 (12%) at 2 weeks after the procedure, with a further decrease to 50% at 3 months; the response was sustained up to 12 months. The decrease in IPSS in

the treatment group at 3 months was significantly higher compared with the control group. In addition, maximum flow rate and quality of life measures were also significantly improved in the treatment group. Details of effects on erectile and ejaculatory function will be reported separately, according to the study authors, but, overall, no clinically significant changes were seen. “The observation of sexual function preservation is important, as it is a critical consideration for many patients when deciding which BPH therapy is optimal for their situation,” comments McVary.

The trial demonstrates the validity and effectiveness of WAVE therapy in treating BPH-related LUTS, with only minimal treatment-related adverse events. “WAVE might also be used to treat other urological conditions and early work to study the effects in cancerous prostate tissue is underway,” concludes McVary. “We look forward to learning more about the outcomes.”

Clemens Thoma

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