EDITORIAL

The prostatic urethral lift: a new treatment for LUTS

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THE SEARCH CONTINUES FOR TREATMENTS FOR LOWER URINARY TRACT SYMPTOMS (LUTS) TO match the long-term effectiveness of surgical intervention but without the peri- and post-operative complications associated with these procedures.

Studies suggest approximately 30% of men treated medically for LUTS do not achieve a successful outcome, either because of lack of effectiveness of treatment or intolerable side effects of long-term medication. Transurethral resection of the prostate (TURP) offers good long-term outcomes for these patients, but with short-term complications such as bleeding and infection, and longer-term problems such as strictures and loss of ejaculatory function.

Laser techniques and a range of minimally invasive procedures have been tried (microwave, injection of ethanol, high-frequency ultrasound etc) but continue to demonstrate significant levels of peri-operative morbidity and longer-term complications.

'No patients reported new onset ejaculatory or erectile dysfunction'

In the past few years, the prostatic urethral lift (PUL) has been proposed as a new minimally invasive surgical technique for the treatment of LUTS secondary to benign prostatic enlargement. The procedure is performed transurethrally and involves insertion of permanent implants that retract obstructing lateral lobes and expand the lumen of the urethra. It can be carried out under local anaesthetic.

Studies to date have been single arm (i.e. no sham procedure or comparison procedure such as TURP as an active control arm). They have shown, albeit in relatively small numbers of patients, fairly impressive reductions in symptom scores, with low complication rates. However, while encouraging these results are clearly not sufficient to be able to recommend this procedure yet as an alternative to more conventional treatment modalities.

The first multicentre blinded randomised controlled study of PUL compared with a sham procedure has recently been published in *The Journal of Urology*.[1]

A total of 206 men, aged 50 or over, with an American Urological Association Symptom Index (AUASI) score ≥ 13, a slow urinary flow rate (≤ 12 ml/second) and a large prostate volume (30-80 cc) were studied. (The AUASI is equivalent to the International Prostate Symptom Score [IPSS]). Men with very large prostates for whom this procedure is clearly inappropriate were excluded.

Patients were randomised in a 2:1 ratio between PUL and the sham procedure (140 men versus 66). The sham procedure consisted of rigid cystoscopy with sounds mimicking the PUL. Patients and the questionnaire administrators were blinded as to which procedure had been performed.

The primary endpoint of the study was reduction in symptom scores. The PUL group saw a decrease in AUASI score at 3 months of 11.1 points versus 5.9 for the sham group ($P = 0.003$). Baseline AUASI score in the PUL group was 22.1, decreasing to 18.0, 11.0 and 11.1 at 2 weeks, 3 months and 12 months respectively ($P < 0.001$). Urinary flow rates were seen to increase, by 4.4 ml/second at 3 months, sustained at 4.0 ml/second at 12 months.

The procedure was safe, with only two serious adverse events. There was an episode of clot retention in a patient restarting warfarin, and another patient needed a bladder stone removed at 12 months.

Most of note however, was that no patients reported new onset ejaculatory or erectile dysfunction.

Clearly this is the first controlled study of a new procedure and as such should be interpreted with caution. The study protocol is to follow up these patients to four years post-procedure and this will be important in ascertaining longer-term efficacy.

The question will also arise, as with previous attempts at the insertion of prostatic stents, as to how to deal with these patients should the procedure fail.

However, it is likely that GPs will start to see patients offered this procedure in the near future, often as part of further clinical trials. If it proves successful, it will offer a very interesting new option for men who do not want to take long-term medication or who are unfit for more definitive surgical procedures.

REFERENCE
1 Roehrborn CG, Gange SN, Shore ND et al. The prostatic urethral lift for the treatment of lower urinary tract symptoms associated with prostate enlargement due to benign prostatic hyperplasia: The L.I.F.T. study. *J Urol* 2013;190:2161-2167

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