

Urolift: a new chapter in benign prostate hyperplasia (BPH) therapy

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For over 30 years transurethral resection of the prostate (TURP) has held onto its crown as the gold standard surgical intervention for benign prostate hyperplasia (BPH), a disease process, which affects nearly 30 million men in Europe (1). However, minimally invasive alternatives such as Holmium laser enucleation of the prostate (HoLEP), thulium laser vapo-enucleation of the prostate (ThuVEP) and prostate artery embolization (PAE) have challenged the current status of this cornerstone treatment and re-shaped the surgical landscape accordingly (2-4). The urolift device (NeoTract Inc., Pleasanton, CA, USA), formally referred to as prostatic urethral lift (PUL), has attracted increased attention among the urological community and is the latest endoscopic method for BPH treatment (5). This novel technology deploys adjustable implants to establish a clear channel in the prostatic fossa via mechanical retraction of the lateral lobes. Potential advantages include a short learning curve and its use in the office setting as a day case procedure under local anaesthetic (LA). It is therefore an option for patients with multiple co-morbidities and patients at a higher risk of general or regional anaesthesia. Importantly, multiple clinical studies have reported no adverse sequelae on sexual function, which has an additional appeal for younger men. Although the long term efficacy of TURP is well recognised, it is associated with retrograde ejaculation in up to 75% of cases (6).

The 12 month results from the BPH6 trial comparing PUL with TURP serves as leading evidence in the evolution of this technology (7). Here, Sonksen et al. have carried out the first prospective, randomised study to compare PUL with TURP. This was carried out across 10 European centres including 80 men who were enrolled between February 2012 and October 2013. Prior to this, PUL had

only been compared to sham procedures. The authors have implemented a novel metric termed the “BPH6” endpoint. This invalidated measure was made up of 6 elements, which assessed continence, preservation of erectile function and ejaculatory function, safety, quality of recovery and relief of symptoms.

Among the PUL group, patients were discharged significantly sooner (1.0 *vs.* 1.9 days, $P < 0.0001$) and time to resuming pre-operative function was significantly faster (11 *vs.* 19 days, $P < 0.04$). Ejaculatory function was improved in the PUL group ($P = 0.03$), however the TURP group suffered a significant decline (40%, $P < 0.0001$). Significant improvements were reported in both groups in regards to International prostate symptom score (IPSS), quality of life (QoL) and maximum urinary flow rate (Q_{max}). However, results after TURP were better for IPSS, Q_{max} and PVR.

This study and its findings published are noteworthy and augment the canon of clinical evidence supporting the urolift device. In September 2015, the National Institute for Health and Care excellence (NICE), released documentation to support the use of urolift in the UK (8). As part of this, the BPH6 trial was cited as part of the clinical evidence favouring the technology.

The urolift has certainly captured the headlines in 2015, however, whether it can maintain this momentum and achieve worldwide dissemination, this remains to be seen. Indeed, there are a number of factors relating to the technology, which have drawn criticism. Firstly, it is not suitable for patients with an obstructing median lobe. Secondly, studies have not been performed in patients with large prostate size (the BPH6 trial excluded prostates greater than 60 cc). These two caveats thus preclude a significant proportion of men with bladder outlet obstruction (BOO).

Improvements in Q_{\max} are disappointing, with no study reporting a final value greater than 15 mL/s. The 3-year results of the L.I.F.T study represent the longest follow up data available at this time (9). Further follow up results will be necessary to fully determine its durability in the long term.

Urolift is an interesting minimally invasive endourological innovation. Although it may not represent the therapeutic choice for one and all, it certainly seems advantageous in a select group of patients. Younger men, wishing to preserve sexual function as a priority may well have the most to gain from this treatment.

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Footnote

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References

1. Cornu JN, Cussenot O, Haab F, et al. A widespread population study of actual medical management of lower urinary tract symptoms related to benign prostatic hyperplasia across Europe and beyond official clinical guidelines. *Eur Urol* 2010;58:450-6.
2. Jones P, Alzweri L, Rai BP, et al. Holmium laser enucleation versus simple prostatectomy for treating large prostates: results of a systematic review and meta-analysis. *Arab J Urol* 2016;14:50-8.
3. Jones P, Rai BP, Somani BK, et al. A review of thulium laser vapo-enucleation of the prostate: a novel laser-based strategy for benign prostate enlargement. *Arab J Urol* 2015;13:209-11.
4. Jones P, Rai BP, Nair R, et al. Current status of prostate artery embolization for lower urinary tract symptoms: review of world literature. *Urology* 2015;86:676-81.
5. Jones P, Rai BP, Aboumarzouk OM, et al. Prostatic urethral lift vs prostate arterial embolization: novel nonablative strategies in the management of lower urinary tract symptoms secondary to benign prostate hyperplasia. *Urology* 2016;87:11-7.
6. Rassweiler J, Teber D, Kuntz R, Hofmann R, et al. Complications of transurethral resection of the prostate (TURP)--incidence, management, and prevention. *Eur Urol* 2006;50:969-79.
7. Sønksen J, Barber NJ, Speakman MJ, et al. Prospective, randomized, multinational study of prostatic urethral lift versus transurethral resection of the prostate: 12-month results from the BPH6 study. *Eur Urol* 2015;68:643-52.
8. NICE medical technology guidance [MTG26]. UroLift for treating lower urinary tract symptoms of benign prostatic hyperplasia. Available online: <https://www.nice.org.uk/guidance/mtg26/resources>
9. Roehrborn CG, Rukstalis DB, Barkin J, et al. Three year results of the prostatic urethral L.I.F.T. study. *Can J Urol* 2015;22:7772-82.

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