

THE ROLE OF URODYNAMICS IN MALE PATIENTS WITH A LONG-TERM CATHETER WHO FAILED A TRIAL WITHOUT CATHETER

Hypothesis / aims of study

Acute urinary retention (AUR) is one of the most common urological emergencies in men. The incidence increases with age and around 30% of men in their 80s will suffer from AUR (1).

The commonest cause of AUR in men is benign prostatic obstruction (BPO) (2). As standard practice, a trial without catheter (TWOC) is attempted usually after starting the patient on an Alpha-one receptor antagonist. If the TWOC fails, the patient may then be offered surgery to treat his BPO. This is commonly in the form of a transurethral resection of the prostate (TURP) (3).

Sometimes urodynamics is requested to differentiate between men with bladder outflow obstruction (BOO) and men who have an underactive detrusor on voiding. However, this can be difficult if the patient is unable to void during the cystometry.

This study reviewed all the patients who attended for urodynamics with a long-term catheter after failing a TWOC and assessed the benefit of urodynamics in this group of men.

Study design, materials and methods

This is a retrospective study of a urodynamics database from November 2012 until March 2017. All men who suffered from AUR, failed a TWOC and underwent a urodynamic study with a long-term catheter were reviewed. Data collected included age, diagnosis, urodynamic parameters and outcomes. The aim of the urodynamics is to see if there is any detrusor pressure generated to help guide whether TURP is indicated or not.

Results

More than 1350 men were referred to urodynamics, but only 49 men met the inclusion criteria. The median age of these men was 73 (range from 46 – 90). Of these 26 (53%) were unable to void during urodynamics and 23 (47%) voided.

The analysis showed that: 36 (73%) were found to either have an underactive (24) or acontractile detrusor (12). 12 (24%) patients had findings suggestive of bladder outflow obstruction on the ICS nomogram and a normal bladder contractility index (BCI). One patient was found to have a normal urodynamics test and was sent home without a catheter. [Figure 1]

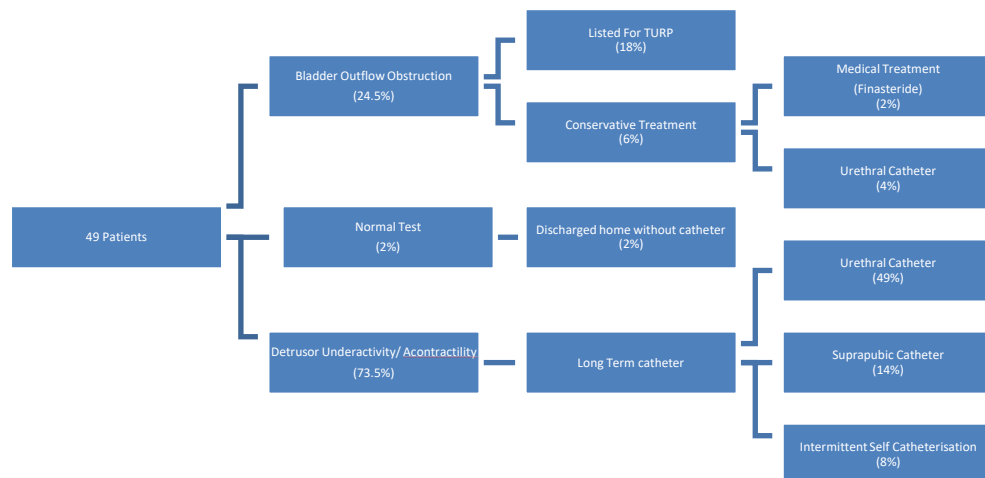


Figure 1: Urodynamics outcomes

Within this sample, only 12 patients were found to have BOO with a median age of 69 (SD 7.8) ranging between 55-82. Of these 12 patients, 9 were listed for surgery (TURP) and 3 had conservative management (1 started on finasteride and 2 continued with a long term urethral catheter). Of the 9 undergoing surgery, 8 (89%) were under the age of 75.

36 patients had an underactive detrusor, the median age was 74 years (range 46-90 years). 31 ended up with a long-term catheter (7 suprapubic and 24 urethral), 4 started intermittent self-catheterisation and 1 had a successful TWOC.

Interpretation of results

Our data shows, more than 70% of the patients would potentially fail to improve after a TURP.

The majority of patients also failed to void and as a result of this, the investigation was not completed. As current practice stands, most men who fail a TWOC after AUR will usually end up having a TURP. However, based on results from this study, urodynamics helped change the management of patients and avoided them having a TURP.

Concluding message

If urodynamics was not available these men would have undergone unnecessary surgery and ended up with the same outcome prior to surgery i.e. in retention. A randomised control trial is needed to look at the outcome of patients in retention and the value of urodynamics in these patients.

References

1. Marshall JR, Haber J, Josephson EB. An evidence-based approach to emergency department management of acute urinary retention. *Emerg Med Pract.* 2014;16(1):1-20; quiz 21
2. Jacobsen SJ, Jacobson DJ, Girman CJ, et al. Natural history of prostatism: risk factors for acute urinary retention. *J Urol.* 1997;158(2):481-487
3. National Clinical Guideline Centre: Acute and Chronic Conditions. Lower urinary tract symptoms: The management of lower urinary tract symptoms in men; NICE clinical guideline 97. National Institute for Health and Clinical Excellence site. Available at: <https://www.nice.org.uk/guidance/cg97/resources/lower-urinary-tract-symptoms-in-men-management-975754394053>.

Disclosures

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