

ROLES OF URODYNAMICS IN THE ASSESSMENT OF POST RADICAL PROSTATECTOMY INCONTINENCE: DO FINDINGS CHANGE PATIENT MANAGEMENT?

Hypothesis / aims of study

Urinary incontinence after radical prostatectomy is aetiologically diverse, and not solely confined to post-surgical stress urinary incontinence (SUI). Previous studies have shown overall incidence of detrusor overactivity (DO) in this group ranging between 25-63% (1). With increasing treatment options for overactive bladder and new surgical procedures for male SUI, we aimed to evaluate the impact of urodynamic study findings on subsequent management in a contemporary cohort of patients with post prostatectomy incontinence.

Study design, materials and methods

Prostate cancer patients with urinary incontinence post open radical prostatectomy, who had failed conservative management/Kegel exercises and being considered for surgical treatment underwent multichannel urodynamic studies according to ICS standards between 2011 and 2015. Patients with adjuvant or salvage radiotherapy, as well as those who have undergone previous surgical treatments for SUI were also included. Urodynamic findings were reviewed and subsequent patient management outcomes obtained from medical records. Patients who had laparoscopic or robotic radical prostatectomies were excluded, as were patients treated with radiotherapy alone.

Results

100 patients (age 51-87, median 69) were included. Prior to urodynamic study, 27 patients had adjuvant or salvage external beam radiotherapy, 13 had prior SUI surgery, and 3 had both. Overall, DO was demonstrated in 47 patients and 43 patients had reduced compliance on filling. Following urodynamic study, 30 patients proceeded to male sling surgery and 25 had artificial urinary sphincter implanted for treatment of SUI, either in isolation or combined with treatment for DO. DO was found in 77% (10/13) of patients with persistent incontinence following previous SUI surgery and 48% (13/27) of patients with previous adjuvant or salvage radiation. In patients with DO, 55% (24/47) were treated solely with anticholinergics, mirabegron or intravesical onabotulinumtoxinA, and did not proceed to surgical management for SUI. 28% (13/47) of patients with DO were managed with surgical treatment for SUI alone and 13% (6/47) received treatment for DO prior to undergoing surgery for SUI. In contrast, only 8% (4/53) of patients without DO required treatment with anticholinergics, mirabegron or onabotulinumtoxinA, either in isolation or combined with surgical treatment for SUI.

Interpretation of results

DO is a common finding post radical prostatectomy and is even more prevalent in those who had failed initial surgery for SUI. More than half of the patients with urodynamic detrusor overactivity in our group were managed by treatment of their DO alone and did not proceed to surgical treatment for SUI. Had urodynamics not been done, these patients may have gone ahead with either a sling or an artificial urinary sphincter implantation. In contrast, majority of our patients without DO proceeded to surgical treatment for SUI alone.

Concluding message

Bladder dysfunction (e.g. DO) is an important cause of post prostatectomy incontinence in addition to sphincter insufficiency, and a significant proportion of such patients can be successfully treated without requiring surgical treatment. Urodynamic study plays an important role in patient evaluation, and helps to optimise the opportunity for successful treatment outcome by guiding individual patient management.

References

1. Thiruchelvam N et al. A review of detrusor overactivity and the overactive bladder after radical prostate cancer treatment. BJUJ, 116 (6): 853-861, Dec 2015

Disclosures

Funding: NONE **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** it is a review of patients who underwent urodynamic studies in accordance to our normal management pathways **Helsinki:** Yes **Informed Consent:** No