W8: LIVE WEBINAR: Optimizing the Treatment of Storage-Dominant Male LUTS: Treat the Prostate, the Bladder or Both.

Workshop Chair: Sanjay Sinha, India

Start	End	Topic	Speakers
		Introduction	Sanjay Sinha
		Case 1. 60yM with Storage (dominant) and Voiding Symptoms: Illustrating the Approach to Medical Management	Paul Abrams
		Case 2. 65yM with Storage (dominant) and Voiding LUTS and Unequivocal Bladder Outlet Obstruction: Illustrating the Approach to Surgical Decision-making	Sanjay Sinha
		Case 3. 79yM with Storage (dominant) and Voiding LUTS and an Underactive Detrusor: Illustrating the Approach to Surgical Decision-making	Victor Nitti
		Case 4. 72yM with Parkinson's Disease, Refractory Storage Symptoms (dominant) and Voiding LUTS. Illustrating the Approach to Invasive Therapies for Storage	Enrico Finazzi Agrò
		Faculty Discussion	Sanjay Sinha Paul Abrams Victor Nitti Enrico Finazzi Agrò
		Questions	All

Aims of Workshop

The objective of this workshop is to help delegates take informed decisions with regard to the management of men with storage-dominant lower urinary tract symptoms (LUTS).

Highlights!

- Four cases chosen strategically to illustrate key decisions
- Learn the logic behind these decisions
- No didactic lectures; emphasis on practical management
- Experienced faculty; navigate the pitfalls
- Over one-third of time allocation for interaction and discussion

Learning Objectives

Learn about the impact of treating voiding symptoms (by medication or surgery) on storage symptoms

Target Audience

Urology

Advanced/Basic

Advanced

Suggested Learning before Workshop Attendance

1. EAU Guidelines on Male LUTS and Urinary Incontinence
2. AUA Guidelines on Surgical Management of BPH

Optimizing the Treatment of Storage-Dominant Male LUTS: Treat the Prostate, the Bladder or Both: Pre-Read Material from the Course Faculty

Critical Lacuna in Evidence and Guidelines for a Common Clinical Problem!
90 minutes that Can Make a Difference to Your Practice!

Background (Sanjay Sinha, INDIA Chair)

Storage symptoms are common in men. The EPIC Study *(Irwin et al, Eur Urol 2006)* examined >19,000 subjects in five countries in a population-based survey and found that OAB symptoms had a prevalence of

11.8% with the rate in men (10.8%) closely approaching that for women (12.8%). OAB symptoms were also noted to be at least as bothersome in men as in women. However, storage symptoms appear to be under-treated in men. A USA database of 462,000 men showed that while a diagnosis of BPH was recorded in 61.5%, treatment for BPH was offered to 73.7% of men. In contrast, a diagnosis of OAB was recorded in 25.8% of men but only 7.0% were offered treatment for OAB *(Burnett et al, Neurourol Urodyn 2020)*.

Under-treatment of storage symptoms in men might be owing to several possible reasons. Under-recognition of the condition, lack of clarity of current guidelines and a misunderstanding that most lower urinary tract symptoms result from prostatic obstruction, might all play a role. It is important to note that bladder outlet obstruction is common in men and obstruction might be associated with storage symptoms. Most men present with a combination of storage and voiding symptoms and correction of obstruction can resolve storage symptoms in a significant proportion of men. Trials for OAB typically focus on women rather than men. However, data from women cannot be directly applied to men. The general lack of evidence with regard to men results in lack of clear recommendations in clinical guidelines.

This workshop aims to discuss the management of storage symptoms in men in a variety of common clinical settings where the issue of managing the bladder, the prostate or both might crop up. Four carefully selected cases will be used as templates for discussion by an experienced faculty with over one-third of time allocated to discussion and interaction.

CASE 1 (Paul Abrams, UK)

Lower urinary tract symptoms (LUTS) are grouped into storage, voiding and post-micturition LUTS, and increasingly assessment focusses on the effect of LUTS on the man's quality of life (QoL). In general, storage LUTS which include frequency, nocturia, urgency and urgency incontinence cause greater symptom bother and have a greater effect on QoL. Epidemiological studies have shown that LUTS are highly prevalent and increase with age and with co-morbidities such as metabolic syndrome. Men with LUTS often have a mixture of storage and voiding symptoms leading to the need to consider more than one cause of LUTS in the individual man. Assessment is further complicated by the poor diagnostic value of individual LUTS, with only the overactive bladder (OAB) symptoms of urgency and urgency incontinence having a reasonable correlation with a urodynamic abnormality, namely demonstrated detrusor overactivity. Indeed, it has been shown that men and women of similar age have a similar pattern of LUTS.

Assessment focusses on recording the man's LUTS using a validated symptom questionnaire. The EAU (Management of Non-neurogenic Male LUTS EAU 2021) now recommends that a questionnaire such as the ICIQ-MLUTS rather than the IPSS is used. This is because the ICIQ-MLUTS records the bother of each symptom as well as QoL impact, and this allows management to be concentrated on the man's most bothersome symptoms. In addition, all men with LUTS should be asked to complete a 3-day bladder diary (the ICIQ-BD is the only validated BD), that documents intake, including liquid type and volumes, as well as voided volumes and times of voids. As nocturia is highly prevalent, the BD is essential, as it is the means of diagnosing nocturnal polyuria, a prevalent but non-urological cause of bothersome nocturia. As voiding LUTS are not diagnostic, and cannot distinguish between the main causes, benign prostatic obstruction (BPO)and detrusor underactivity (DU), a minimum of uroflowmetry should be performed. It is still argued whether or not pressure-flow studies (PFS), the only means of distinguishing BPO from DU, should be done prior to invasive treatment.

Management of LUTS can be divided into lifestyle interventions/behavioural modifications, drug therapy and invasive treatment.

- Lifestyle interventions are "common-sense" changes, also known as "self-care", that can have highly beneficial changes on a man's LUTS These are the changes we would make, as HCPs, if we were bothered by LUTS. The BD is key as it allows the man and his doctor/nurse, to monitor the effects of manipulating liquid and water containing food intake, to minimise OAB (storage) LUTS. Caffeine increases OAB symptoms and many older men tell us that they have reduced caffeine intake and noted improvement in their OAB symptoms.
- Behavioural modifications include bladder retraining to achieve greater control over the bladder in OAB, and relies on keeping a BD to lead the voiding schedule and for assessing progress. Improving pelvic floor function by pelvic floor muscle exercises (PFME) also helps OAB as well as the annoying symptom of post-micturition dribble. Men need to be told that PFME like any other muscle exercise aiming at increasing muscle strregth require persistence on the part of the man

- Both lifestyle interventions and behavioural modifications remain useful if the man decides that he need to consider medical or surgical treatment of his bothersome LUTS.

traditionally been related to bladder outlet obstruction (BOO), most frequently when histological BPH progresses through benign prostatic enlargement (BPE) to BPO [6,9]. However, increasing numbers of studies have shown that LUTS are often unrelated to the prostate [8,16]. Bladder dysfunction may also cause LUTS, including detrusor overactivity/OAB, detrusor underactivity/underactive bladder, as well as other structural or functional abnormalities of the urinary tract and its surrounding tissues [16]. Prostatic inflammation also appears to play a role in BPH pathogenesis and progression [17,18]. In addition, many non-urological conditions also contribute to urinary symptoms, especially nocturia.

CASE 2 (Sanjay Sinha, INDIA)

Lower urinary tract symptoms are most often a quality-of-life problem and treatment is typically symptom-directed. Men with refractory storage symptoms present with a spectrum of voiding symptoms that can range from a complete absence of voiding difficulty to severe voiding symptoms. While the decisions regarding management can be fairly obvious in men with isolated severe storage or those with obvious obstruction-associated storage symptoms, there are a large sub-group of men in whom these decisions are not as straight-forward. In men with refractory storage-dominant LUTS facing invasive therapy, urodynamics can be useful in clinical decisions.

In this case we will examine the sequence of events that could lead to urodynamics evaluation and the implications of finding bladder outlet obstruction. Should all men automatically qualify for surgery? What are the implications of treating refractory storage symptoms with invasive treatments such as botulinum toxin in men demonstrating obstruction without any ‘red flags’?

We will explore these issues and more through a clinical case. Along the way, we will also discuss alternate clinical presentations with subtle variations on the main theme.

CASE 3 (Victor Nitti, USA)

Male lower urinary tract symptoms (LUTS) and be divided into storage and voiding symptoms. Furthermore, each of these symptom types and be caused by bladder dysfunction (e.g., detrusor overactivity or underactivity), outlet dysfunction (functional or anatomic obstruction, or outlet deficiency), or a combination of both. Furthermore, symptoms and dysfunctions often overlap, making treatment decisions more complex. For example, it is well known that BPO is associated with detrusor overactivity (DO) and storage symptoms (urinary urgency, urgency incontinence). But detrusor underactivity (DU) and also be associated with such symptoms. In these situations, it is often important to make a precise diagnosis and understand patients’ expectations from treatment, including expected management outcomes and willingness to assume risk.

In the case of DU in the male, this is critically important. DU has a number of etiologies including myogenic (from long-term BOO, or conditions like diabetes, or even aging) and neurogenic. Each of these causes is potentially treated differently. The diagnosis of BOO in the face of DU is challenging. Our current diagnostic criteria do not allow for a definitive diagnosis of obstruction in the face of DU when p_{det} < 40 cmH20, and do not allow for a diagnosis of obstruction at all when p_{det} < 20 cmH20. In these cases, clinical judgement and some subtleties in the history and urodynamic study can help guide in counseling patients.

Treatments for DU are limited. There are no reliable pharmacological agents to improve bladder contractility, and sacral neuromodulation has limited applicability to many men with DU. Facilitating bladder emptying by intermittent or continuous catheter draining is not routinely accepted by all. Thus, treatment of symptoms is if often focused on relief of presumed obstruction, or controlling associated overactive bladder symptoms without actually treating DU. There are a number of well-done studies in the literature that have shown benefits of treatment BOO in patients with DU, but it is important to keep in mind the specifics of individual patients (history, symptoms, urodynamics, expectations) before counseling.

Situations where surgical treatment of the bladder outlet in a man with DU could be appropriate include the following:

- When other treatments to control symptoms have failed
- When it is felt that obstruction is the cause of DU or is associated with DU
- When the patient is willing to accept possible complications of treating the outlet knowing a successful outcome may be less certain
- After a period of decompression and retesting the bladder to access for improved contractility in a patient not willing to undergo surgery initially

Other things to consider when discussing surgical treatment of the outlet are the patient's goals and expectations. In some cases, goals are to improve symptoms, while for others it may be to resume spontaneous voiding, or to reduce the number of self-catheterizations per day. Depending on the patient's, goals, "surgical success" may vary.

We will explore these concepts via a case of a 79-year-old man with storage (dominant) and voiding LUTS and DU, illustrating the approach to surgical decision-making.

CASE 4 (Enrico Finazzi Agrò, ITALY)

Parkinson's Disease (PD) is the second most common neurodegenerative condition in the elderly. Although predominantly a movement disorder, PD is commonly associated with non-motor symptoms, including neuropsychiatric disturbances, sleep disorders, and autonomic symptoms. LUT symptoms (LUTS) are the most common manifestation of autonomic dysfunction. Both storage symptoms (urinary urgency, increased daytime frequency, nocturia, and incontinence) and voiding symptoms (e.g., hesitancy, interrupted or poor stream, and double voiding) are reported in PD. Approximately 38–71% of patients with PD report these symptoms.

An invasive urodynamic evaluation is recommended by the EAU guidelines before surgery or invasive treatments. Urinary symptoms are mainly attributed to Detruror Overactivity (DO) (81%) and external sphincter relaxation problems (33%). During micturition, PD patients may show detrusor-underactivity and bladder outlet obstruction. Whenever storage symptoms are not responding to the conservative treatments and if the invasive urodynamic test confirm the indication, third line or specialised treatments such as botulinum toxin or neuromodulation may be suggested.

Botulinum neurotoxin type a (BoNT/A) and in particular onabotulinum-toxinA is indicated in some patients (multiple sclerosis, spinal cord injury) with neurogenic detrusor overactivity; some Authors found that botulinum toxin type A injections into the detrusor muscle is an effective and safe treatment for refractory OAB symptoms and DO related to PD. Few data are reported on sacral nerve neuromodulation in PD patients, whilst Posterior tibial nerve stimulation (PTNS) was found able to acutely suppress DO and increase bladder capacity.
When storage LUTS are due to Benign Prostatic Obstruction (BPO) a transurethral resection of the prostate (TURP) may be considered. Excluding patients with Multiple System Atrophy (MSA), TURP for BPO in patients with PD may be successful in up to 70% of patients and the risk of de novo urinary incontinence is minimal.

Reference:
Sakakibara R, Panicker J, Finazzi-Agro E, Iacovelli V, Bruschini H; Parkinson's Disease Subcomittee, The Neurourology Promotion Committee in The International Continence Society. A guideline for the management of bladder dysfunction in Parkinson's disease and other gait disorders. Neurourol Urodyn. 2016 Jun;35(5):551-63. doi: 10.1002/nau.22764. Epub 2015 Mar 25. PMID: 25810035.