

Tips and tricks for lower urinary tract symptoms

Nov 21, 2017 | 0  | [onthepods,urology](#)

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Dr Joanna Dargan, a [Urology](#) Trainee, talks to James about working up a patient with lower urinary tract symptoms.

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With Dr Joanna Dargan, Urologist in training, Sydney, Australia

Introduction

Lower urinary tract symptoms are common presentations in primary care, emergency and ward-based medicine. Junior medical staff are often the first responders to these complaints and knowing how to work up a patient as well as which red flags to look out for is critical. This podcast gives us some tips and tricks about handling patients with lower urinary tract symptoms.

Case

A 78-year-old male presents with dysuria, difficulty voiding and occasional incontinence.



1. Initial questions to the patient

- Storage symptoms
 - Urgency, frequency, incontinence, suprapubic discomfort
- Voiding symptoms
 - Intermittency, straining to void, hesitancy, post-terminal dribbling or sensation of incomplete emptying
- Need to determine if the symptoms actually bother the patient

2. Assessment approach by the bedside

- **History**

- Ask about all the above symptoms and then specifically:
 - Do any of the symptoms happen in combination?
 - How long have the symptoms been happening?
 - Any recent medication changes?
- Comorbidities:
 - Heart disease
 - Obstructive sleep apnoea
 - Recurrent infections
 - Steroid use
 - Neurological disease/diabetes - affect lower urinary tract function
- Red flags requiring more urgent investigation:
 - Recent catheterisation
 - Recent serious infections
 - Episodes of haematuria/clot retention
 - Recent neurological symptoms or diseases - e.g. stroke or spinal cord compromise
 - Urinary symptoms can sometimes be the first symptoms of neurological diseases like multiple sclerosis, spinal cord lesions and cord compression (emergency!)

- **Examination**

- Haemodynamics and vital signs specifically if haematuria present
- Renal angle tenderness, suprapubic tenderness
- Full neurological examination
 - Sensation - lower sacral dermatomes and myotomes specifically
 - If any concerns, then an spinal MRI is indicated

3. Differential diagnosis for lower urinary tract symptoms

- **Bladder outlet obstruction**

- Prostatic hypertrophy is the most common cause
- Strictures are also common from long hospital admissions with catheters, trauma or surgery involving the urethra, e.g. transurethral

resection of the prostate (TURP) or retrograde endoscopic procedure

- Detrusor muscle over activity
- Underlying infection/inflammatory process
- Tumour - urinary tract, nervous system, bladder
- Stones

4. Investigations

- Bladder Scan looking at post void residual
 - In this case, the most concerning differential is urinary retention with overflow - important to get a bladder scan to look at post void residual
- Urine analysis
 - Blood - may suggest malignancy
 - Leukocytes/nitrites - suggest infection
- Urine microscopy and culture
- Renal function tests
- Spinal MRI - if any suggestion of spinal compression
- CT imaging if previous recurrent infections or haematuria - looking for stones or a tumour

5. Outpatient presentations

- Recurrent urinary tract infections without known cause require referral to urology clinic
 - Particularly if the patient is immunocompromised
 - Also consider an undiagnosed urinary stone - cross-sectional imaging is required
- Bladder symptoms with a history of urolithiasis - then consider cross-sectional imaging and working them up from a stones point of view

6. Tips and tricks

- Patients with a small stone at the distal end of the ureter may present with bladder symptoms such as urgency and frequency

- If the patient has had haematuria previous to the lower urinary tract symptoms, then consider clot retention –do a bladder scan and complete work up for haematuria
- In the ICU, catheters are inserted frequently – always consider catheter-related urinary tract infections and remember that ICU microbes may differ from normal community pathogens
- Any medication changes can precipitate urinary retention
 - For example – an increase in diuretics or recent intravenous fluid resuscitation can tip the patient into urinary retention if they have detrusor issues



Take home messages

- Assess how bothered the patient is by their symptoms and their quality of life
- Consider if they have an increased falls risk with having urinary frequency
- Exclude stones & infections
- Don't miss further workup of neurological symptoms or haematuria

Related Podcasts

- [Urinary retention](#)
- [Haematuria](#)

Tags: #bladder outlet obstruction,#bladder scan,#catheter,#dysuria,#haemodynamics,#incontinence,#lower urinary tract symptoms,#neurological examination,#prostatic hypertrophy,#strictures,#TURP,#urinary,#urinary symptoms,#urine analysis,#urologist,#urology,#UTI