

Tips and tricks for lower urinary tract symptoms

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

Joanna Dargan is currently working in New South Wales and interested in medical education and training.

Tips and tricks for lower urinary tract symptoms

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 urethrae.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 scan,#dysuria,#urinary,#urology

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