

The ABCs of Acute Urinary Retention

Definition

“**Acute urinary retention** refers to the sudden inability to pass urine.”

Pathophysiology

Urinary retention happens when there is narrowing or blockage of the urinary tract, damage to the bladder muscles rendering them unable to contract or disturbance to the nerves that control the bladder muscles (detrusor muscle and the bladder muscle sphincter) that control the opening of the bladder.

Risk factors

Category	Causes
Obstructive	<ul style="list-style-type: none">• Benign prostatic hyperplasia or prostate cancer• Infection of prostatic gland• Fallen bladder (cystocele) in menopausal women which commonly occurs together with uterine prolapsed due to weaken pelvic floor muscles• Urinary stone stuck in the urethra
Urinary Tract Infection	<ul style="list-style-type: none">• Urethral stricture because of scarring due to injury or infection, eg. sexually transmitted disease
Medication	<ul style="list-style-type: none">• Anti-muscarinics• Spinal• Epidural anaesthesia
Neurological	<ul style="list-style-type: none">• Peripheral neuropathy• Iatrogenic nerve damage during pelvic surgery• Upper motor neurone disease (such as Multiple Sclerosis Parkinson's disease)• Bladder Sphincter Dyssynergy



Clinical features

- Patients will present with acute suprapubic pain and an inability to micturate.
- On examination, the patient will have a palpable distended bladder, with suprapubic tenderness.
- Any associated fevers/rigors or lethargy may suggest an infective cause. Ensure to perform a PR examination, especially in elderly patients, to assess for any prostate enlargement or constipation.



Investigations

- Urinalysis
- Serum blood urea nitrogen, creatinine, electrolytes
- Serum blood glucose
- Prostate-specific antigen
- Renal and bladder ultrasonography
- Pelvic ultrasonography; CT of abdomen and pelvis
- MRI or CT of brain
- MRI of spine
- Cystoscopy, retrograde cystourethrography
- Urodynamic studies

Management

- Bladder decompression
- Trial Without Catheter (TWOC)
- Surgical procedure (TURP)

Complications

- Acute kidney injury
- Urinary tract infection
- Complications with catheterization
 - Infection
 - Hematuria
 - Transient hypotension
 - Post obstructive diuresis may persist after decompression of the bladder