Table 2

Investigations for urinary retention in men

Test type	Baseline diagnostic tests	Rationale
Laboratory	Urinalysis	Evaluate for infection, haematuria, proteinuria, glucosuria
	Serum creatinine, urea nitrogen	Evaluate for renal failure from lower urinary tract obstruction
	Serum glucose	Evaluate for undiagnosed or uncontrolled diabetes mellitus in neurogenic bladder
	PSA	Elevated in prostate cancer; may be elevated in BPH with retention: consider delaying if normal DRE
	Diagnostic tests	**Rationale**
Imaging studies	Renal and bladder ultrasonography	Measure prostate size, PVR; evaluate for bladder and urethral stones, hydronephrosis, and upper urinary tract disease
	Pelvic ultrasonography; CT abdomen and pelvis/MRI pelvis	Evaluate for suspected prostate cancer, pelvic, abdominal, or retroperitoneal mass or malignancy causing extrinsic bladder neck compression
	MRI or CT brain	Evaluate for intracranial lesion, including tumour, stroke, multiple sclerosis (MRI preferred in multiple sclerosis)
	MRI spine	Evaluate for lumbosacral disc herniation, cauda equina syndrome, spinal tumours, spinal cord compression, multiple sclerosis
	Second line diagnostic tests	**Rationale**
Other	Cystoscopy, retrograde cystourethrography	Evaluate for suspected bladder tumour and bladder or urethral stones or strictures
	Urodynamic studies (e.g. uroflowmetry, cystometry, electromyography, urethral pressure profile, video urodynamics, pressure flow studies of micturition)	Evaluate bladder function (detrusor muscle and sphincter) in patients with neurogenic bladder to help guide management. Also prior to bladder outflow surgery in those with high residual volumes e.g. > 3 litres