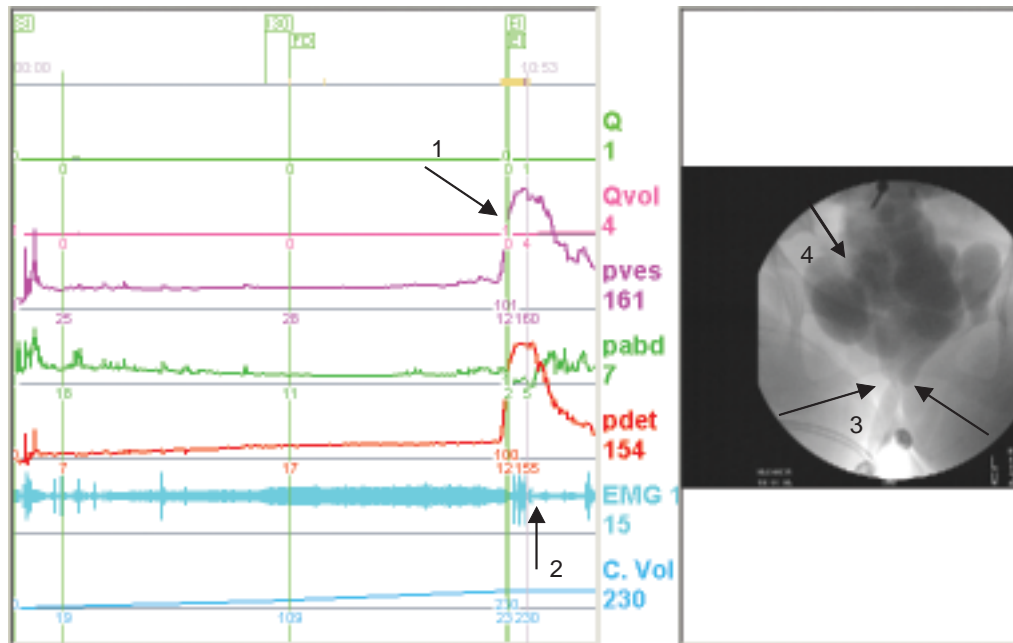


# Spastic Urethral Sphincter with Bladder Outlet Obstruction in a Woman

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## BRIEF HISTORY

The patient was a 20-year-old woman with the chief complaint of chronic urinary retention for 12 years. She had episodes of gross hematuria and severe difficulty urinating at age 8, and underwent surgery for bladder diverticulum. After that, she started to use clean intermittent self-catheterization (CISC) for urinary retention. Another surgery was performed at age 15 because she was diagnosed with multiple bladder diverticulum. However, the operation did not relieve her dysuria symptom. CISC 4-5 times per day was performed with urine amount of about 200 mL at each catheterization.

## CLINICAL INVESTIGATION

Cystoscopy at the Outpatients Department (OPD) revealed a patent urethra and marked bladder trabeculation. Neurological examination produced negative findings. A videourodynamic study was performed in order to investigate the pathophysiology of the chronic urinary retention.

## URODYNAMIC STUDY

Videourodynamic study was performed using a 6 Fr double-lumen catheter infused with normal saline at a speed of 30 mL/min. First sensation was experienced at 109 mL, full sensation of filling at 201 mL and urge sensation at 230 mL. A strong and rapid rise of detrusor pressure occurred when the bladder capacity was reached (1). Pelvic floor electromyography (EMG) showed concomitant relaxation during detrusor contraction (2). During the voiding phase, the bladder neck and proximal urethra were wide open but the middle urethra remained closed although she was attempting to void (3). The bladder diverticula became distended during the voiding phase (4). Electrophysiology study using concentric needle EMG revealed normal motor unit potentials in the urethral sphincter.

## DIAGNOSIS AND MANAGEMENT

Impression of detrusor overactivity with a spastic urethral sphincter causing functional bladder outlet obstruction. As there was no polyphasic EMG activities, urethral denervation and re-innervation was not likely. The patient could not be diagnosed with Fowler syndrome and urethral botulinum toxin A injection might be helpful.