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Urethral Stricture and Detrusor Overactivity in a Female Stroke Patient

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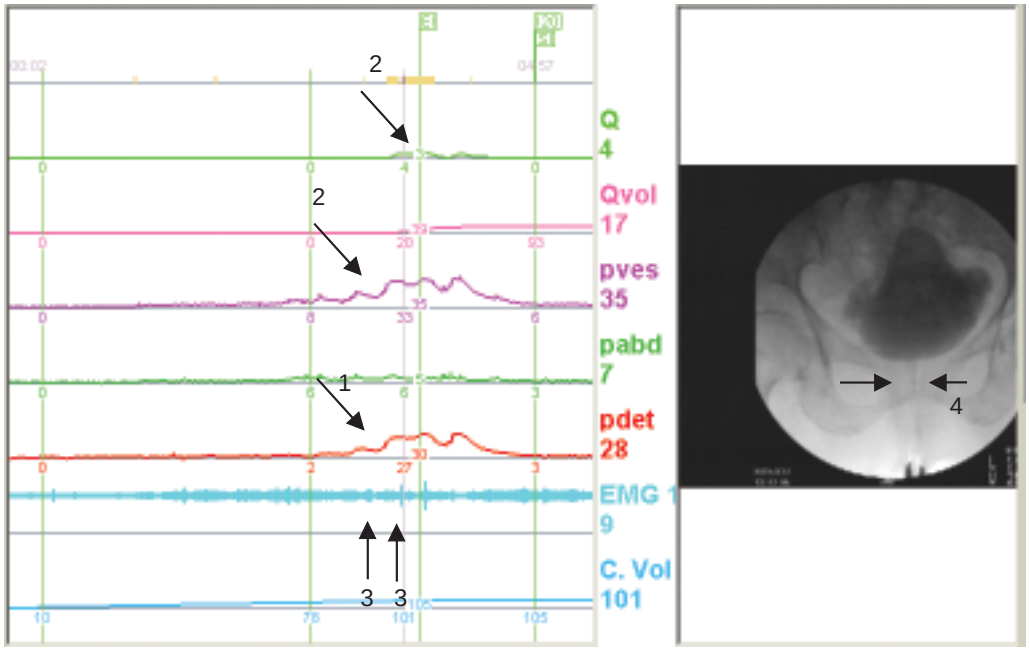

BRIEF HISTORY

An 86-year-old woman had suffered from chronic stroke symptoms for more than 20 years. She had a history of recurrent urinary tract infection and chronic urinary retention. She was told to undergo clean intermittent catheterization (CIC) three times per day and the post-void residue was around 100-210 mL. The patient did not complain of constipation.

CLINICAL INVESTIGATION

On examination she was not ill-looking and there was only mild impairment of left leg function. A neurological examination failed to find any sign of sacral cord neuropathy. Urinalysis also showed no evidence of urinary tract infection.

URODYNAMIC STUDY

Videourodynamic study was performed using a 6 Fr double-lumen catheter, 8 Fr rectal balloon catheter and perineal surface patch electromyography (EMG) with an infusion rate of 30 mL/min. The post-void residue was around 80 mL, first sensation was experienced at 146 mL and urge sensation at 165 mL. When she experienced urge sensation, a phasic detrusor contraction was noted to occur with a gradually increased pressure and voiding could not be inhibited (1). The maximum flow rate (Qmax) was 8 mL/s and detrusor pressure (Pdet) at Qmax was 30 mL (2). During voiding, intermittent sphincter activities occurred but, generally, there was coordinated sphincter relaxation (3). The cystourethrography showed a trabeculated bladder with two diverticula. The bladder neck was open during voiding but the entire urethra remained narrow (4).

DIAGNOSIS AND MANAGEMENT

From the urodynamic study, urethral stricture causing anatomical stricture should be considered. As the sphincter relaxation was generally good, dysfunction voiding is not likely. Lack of estrogen and atrophy of the urethra in the elderly could be the etiology for her bladder outlet obstruction (BOO). Cystoscopy with serial urethral dilatation is necessary for further diagnosis and treatment. Estrogen replacement therapy might also be helpful.