Idiopathic Detrusor Overactivity without Bladder Outlet Obstruction in a 77 Year-old Man

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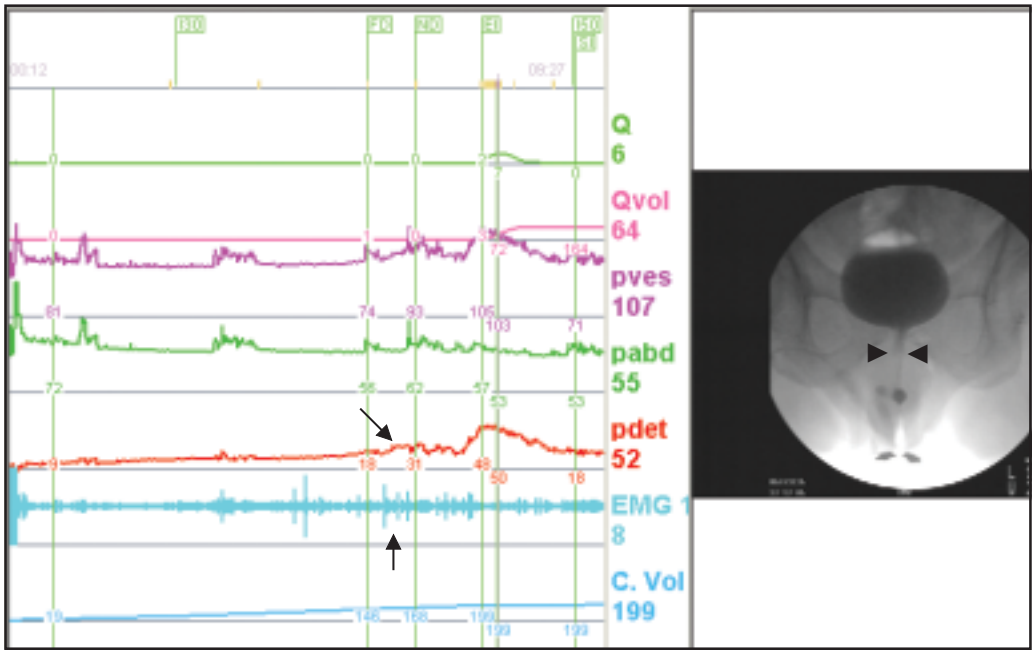

BRIEF HISTORY

This 77 year-old man had benign prostatic hyperplasia and lower urinary tract symptoms for 10 years. He was treated with an alpha-blocker and 5-alpha-reductase inhibitor and the symptoms of difficult urination and intermittency resolved. However, in the last year he experienced increased urgency and occasional urge incontinence that were refractory to antimuscarinic agent therapy. The prostate volume was 33 mL and the postvoid residual was 30 mL.

CLINICAL INVESTIGATIONS

The prostate was the size of a small hen egg with a smooth surface, and was elastic and firm. The bladder was not distended and no neurological sign was detected.

URODYNAMIC FINDINGS

Videourodynamic study was done using a 6 Fr transurethral double-lumen catheter, 8 Fr rectal tube and surface patch electromyography (EMG). The infusion rate was 30 mL/min. The first sensation of bladder filling was perceived at 146 mL, full sensation at 168 mL and urge sensation at 200 mL. The bladder compliance was fair (16 to 20) and an uninhibited increase in detrusor pressure and increased sphincter EMG activities were noted when he started to feel urgency (arrows). During the voiding phase, the voiding detrusor pressure was 32 cm water and maximum flow rate was 8 mL/s, with a voided volume of 164 mL. EMG relaxation during voiding was good. A voiding cystourethrogram showed a patent bladder neck and prostatic urethra (arrow heads).

CLINICAL DIAGNOSIS AND MANAGEMENT

The videourodynamic study revealed that the patient had detrusor overactivity (DO) without bladder outlet obstruction. There was no phasic detrusor contraction during the filling phase, indicating the detrusor overactivity at a high bladder volume was induced by stretching of the bladder wall. Since an antimuscarinic agent failed to resolve his DO, intravesical resiniferatoxin instillation or detrusor injection of botulinum toxin A may be helpful.