Urethral Diverticulum as the Etiology of Urgency Urinary Incontinence

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BRIEF HISTORY

A 44-year old woman complained of frequency, urgency, urgency urinary incontinence, and mild stress urinary incontinence for more than one year. She had had a child through normal spontaneous delivery and had been treated with antimuscarinics but these failed to resolve symptoms.

PHYSICAL EXAMINATION AND LABORATORY FINDINGS

Physically she was in good health without any neurological findings. The anterior vaginal wall was slightly bulging out, but no tenderness was felt on palpation. Uroflowmetry revealed a maximum flow rate (Qmax) of 10mL/s, a voided volume of 224 mL and postvoid residual volume of 40 mL. Transrectal sonography of the urethra and bladder showed multiple cystic dilatation below the urethra and tenting of the bladder base. Cystoscopy was performed and external compression of the bladder base and urethra was noted (A). Under the impression of a paraurethral cyst or urethral diverticulum, a videourodynamic study (VUDS) was arranged.

VIDEOURODYNAMIC FINDINGS

VUDS was performed using a 6 Fr double lumen catheter (B). The first sensation of filling was perceived at 196 mL, full sensation at 233 mL, then urgency sensation at 252 mL followed by a spontaneous detrusor contraction. Patient voided with a detrusor pressure of 52 cmH_2O and a Qmax of 6 mL/s (arrows). The electromyographic activity was coordinated during the initiation of voiding. During micturition, a slowly dilated paraurethral cyst was noted surrounding the proximal urethra (arrow heads). The dilated cyst did not disappear after completion of the micturition.

DIAGNOSIS AND MANAGEMENT

After the VUDS, a cystoscopy was performed and a small diverticular ostium was found at the 7 o' clock position of the anterior urethra, the interior mucosa of the diverticulum was clearly seen without any abscess formation (C). Urethral diverticulum was diagnosed and a transvaginal diverticulectomy was scheduled to excise the diverticulum and close the ostium.