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Infravesical Obstruction Due to Benign Intraurethral Prostatic Cyst

We report a case of symptomatic intraurethral prostatic cyst in a 42-yr-old man without clinical evidence of benign prostatic hyperplasia. The intraurethral cyst makes it unique from the all previously reported cases of prostatic cysts located medially within the prostate. Transurethral resection of the cyst with limited resection of the prostatic tissue at the base of the cyst was performed with successful resolution of voiding symptoms.

Key Words : *Bladder Neck Obstruction; Urethral Obstruction; Cysts; Prostatic Diseases*

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INTRODUCTION

The prevalence of prostatic cysts detected by transrectal ultrasound is 5% (1). Most prostatic cysts are asymptomatic and are located in the medial portion of the prostate. Midline cysts are located posteriorly at the prostatic floor, originating from posterior structures such as the utricle, the ejaculatory duct, or an intraprostatic ectopic ureter. We report a patient with a unique intraurethral prostatic cyst that originated from the left side of the lateral lobe of the prostate (2 o'clock direction) and discuss the clinical presentation, transrectal ultrasonographic/cystoscopic features, and management. To our knowledge, this is the second documentation of such an entity in published reports.

CASE REPORT

A healthy 42-yr-old man presented with a 10-yr history of progressive, infravesical obstructive symptoms that did not respond to medical therapy such as alpha-blocker. The International Prostate Symptom Score (IPSS) was 18, and the quality of life (QOL) score was 5. Digital rectal examination revealed a minimally enlarged prostate without palpable nodules. Uroflowmetry showed a peak flow rate (Q_{max}) of 7 mL/sec (200 mL voided volume) and a postvoid residual urine volume of 150 mL. The cyst (20×15 mm) was anechoic and appeared to be obstructing the bladder neck on the transrectal ultrasonography (Fig. 1A) A large, fluid-filled cyst with a smooth surface was located at the bladder neck on cystoscopy (Fig. 1B). The cystic lesion had a single short stalk that originated from the left lateral lobe of the prostate. The cyst appeared to be obstructing the bladder outlet by a ball-valve action. There was no lateral lobe prostatic hypertrophy. The bladder was moderately trabeculated. Both ureteral orifices were normal and distant from the cyst. The prostate measured 35 mL. Transurethral resection of the cyst at base of the cyst was performed. The histopathologic findings were consistent with a benign cyst lined with columnar epithelium and proliferative urothelial lining (Fig. 2). We performed a follow-up check at 3 months after surgery. Postoperatively, Q_{max} increased to 15 mL/sec without residual urine. There was neither erectile dysfunction nor retrograde ejaculation.

DISCUSSION

Prostatic cysts are common, with a 5% incidence in a male population (1).

A cyst in the midline of the prostate gland is a müllerian duct cyst or a utricular cyst. These terms tend to be used interchangeably but recent studies suggest different embryological origins. The müllerian duct cyst is of mesodermal origin, not communicating with the prostatic urethra or seminal vesicles, and it never contains sperm. In the utricular cyst, which is of endodermal origin, the ejaculatory ducts can be localized in the lateral wall of the cyst, communication with the prostatic urethra is common and sperm may be present (2, 3).

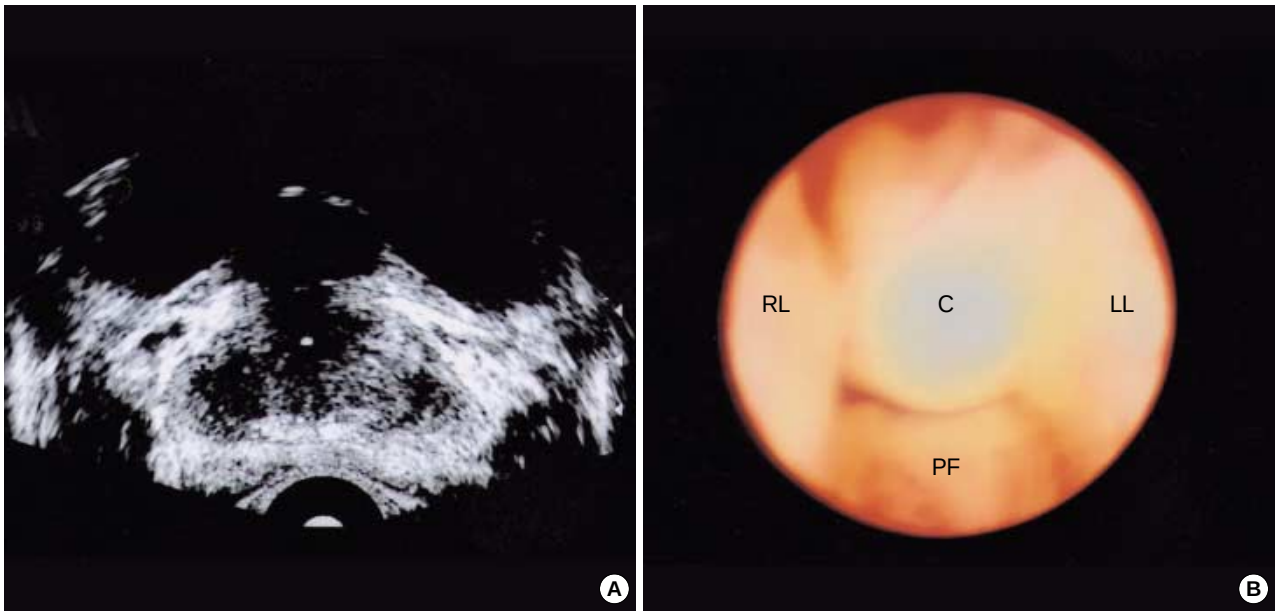

Fig. 1. (A) Basal portion of the urinary bladder near the bladder neck reveals a 20×15 mm sized cystic lesion on transrectal ultrasound. (B) The cyst with smooth surface is located at the bladder neck and there is a crescent-shaped narrow space noted on cystoscopy. RL: right lateral lobe; LL: left lateral lobe; C: cyst; PF: prostate floor.

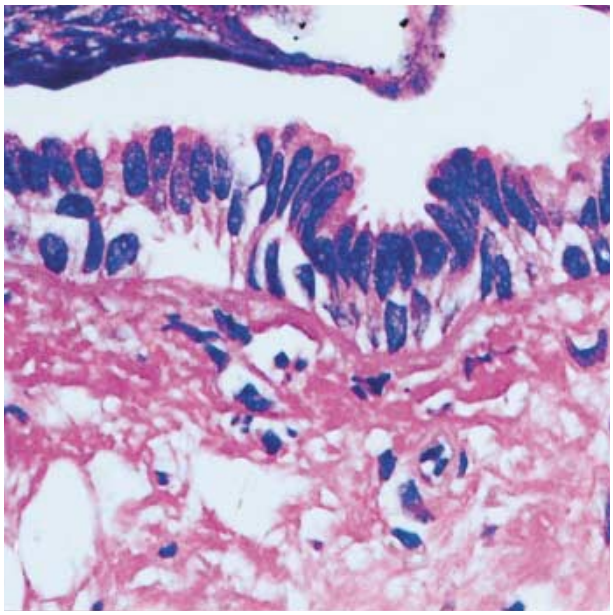

Fig. 2. Histologically there is no evidence of cytologic atypia, and columnar epithelium can be seen, indicating prostatic origin. This could be a simple cyst of nodular hyperplasia. Also noted proliferative changes in the urothelial lining (H&E, ×200).

A medial prostatic cyst is localized in the central zone of the prostate, which contains both ejaculatory ducts that course from the seminal vesicles toward the verumontanum (4).

Associated symptoms of prostatic cyst include irritative or obstructive voiding symptoms.

A medial prostatic cyst can cause prostatitis-like symptoms and that marsupialization of the cyst can provide symptom relief in the majority of patient (1).

The patient described here experienced more obstructive than irritative symptoms. To our knowledge, an intraurethral prostatic cyst with obstructive symptoms is a relatively rare clinical situation. Although the obstructing intraurethral prostatic cyst is uncommon, this entity should be considered in the differential diagnosis of patient with obstructive voiding symptoms (5). We recommend a transurethral resection of the cyst only at the base of the cyst as the primary treatment, particularly in a young patient. In a patient without lateral lobe hypertrophy, the transurethral resection of the prostate has a high risk of erectile dysfunction and retrograde ejaculation.

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