



Polypoid Cystitis Presenting as a Protruding Urethral Mass

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Polypoid cystitis, presenting as a protruding urethral mass, is extremely rare. We present a 35-year-old woman with a sudden protruding urethral mass that was found after approximately 1 week of voiding difficulty. A cyst-like lesion around the urethra and thickening of the right posterior bladder wall were observed on a computed tomographic scan. Cystoscopy revealed that the protruding mass originated from the posterior wall of the urinary bladder and was connected by a stalk. Transurethral excision of the bladder mass was carried out, with polypoid cystitis diagnosed histopathologically.

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Received: March 16, 2010
Revised: May 7, 2010
Accepted: May 17, 2010

KEY WORDS:

female voiding dysfunction;
polypoid cystitis;
urinary bladder neoplasms;
urethral obstruction

1. Introduction

Polypoid cystitis, a benign lesion characterized by polypoid lesions with prominent stromal edema and chronic inflammation, is most commonly found in patients with a long-term history of urinary catheterization but is not exclusive to them.^{1–3} Cystoscopy shows that it resembles a papillary urothelial neoplasm. Polypoid cystitis presenting as a protruding urethral mass is extremely rare. We report a 35-year-old woman who had a sudden protruding urethral mass after approximately 1 week of voiding difficulty.

2. Case Report

A previously healthy 35-year-old woman suddenly noted a mass protruding from her urethra after micturition. Before the urethral mass appeared, she had had voiding difficulty, abdominal straining, frequency, a weak stream, dysuria, and incomplete urination for approximately 1 week. No fever, hematuria, incontinence, vaginal spotting, or discharge was observed. Reviewing her history,

no urethral catheterization, vesical stone, urothelial carcinoma, or radiation was found.

On physical examination, the mass was found to protrude from the urethral meatus (Figure 1). It was soft, non-tender, 5 cm long, and had a smooth, mucinous surface.



Figure 1 A soft, non-tender, 5×2.5×1 cm mass with a smooth, mucinous surface protruding from the urethral meatus. Focal ischemic change was observed.

A 12 French Foley catheter was first inserted to relieve the voiding difficulties. The patient's complete blood cell count and renal function profile were within normal limits. Microscopic hematuria and pyuria were observed in a urinalysis. Urine culture yielded *Streptococcus agalactiae*. An abdominal computed tomographic (CT) scan revealed a cyst-like lesion around the urethral meatus and thickening of the right posterior bladder wall (Figure 2). Cystoscopy was performed under spinal anesthesia and showed a smooth urethra and a soft-tissue mass in the right posterior bladder wall, connected to the protruding mass by a stalk (Figure 3). Transurethral resection of the bladder mass was performed, and the soft-tissue mass was removed en bloc from the urethra with the bladder wall to which its base was attached. Histopathology of the urethral and bladder masses showed diffuse inflammatory cell infiltration in edematous stromata. The overlying urothelium was mostly denuded. No urothelial neoplasia or mesenchymal tumors were observed (Figure 4). According to the gross and microscopic features, polypoid

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cystitis was diagnosed. The Foley catheter was removed 2 days after surgery, and the patient recovered well, without further lower urinary tract symptoms. No recurrence was found during 3 months of follow-up.

3. Discussion

Polypoid cystitis, first described by Mostofi, is believed to be caused by an insult to the bladder mucosa, especially in the presence of an indwelling urethral catheter.⁴ It may also occur in patients with bladder/urethral stones and benign prostatic hyperplasia. Past bladder/ureter carcinoma treatment and radiation for prostate cancer are other possible associated factors.⁵ Clinical manifestations of polypoid cystitis include voiding dysfunction, bladder obstruction, gross hematuria, and a colovesical fistula; however, it can also be asymptomatic.⁵ Grossly, it often appears as small, multiple masses, which can be confused with a papillary urothelial neoplasm.⁶ A definite

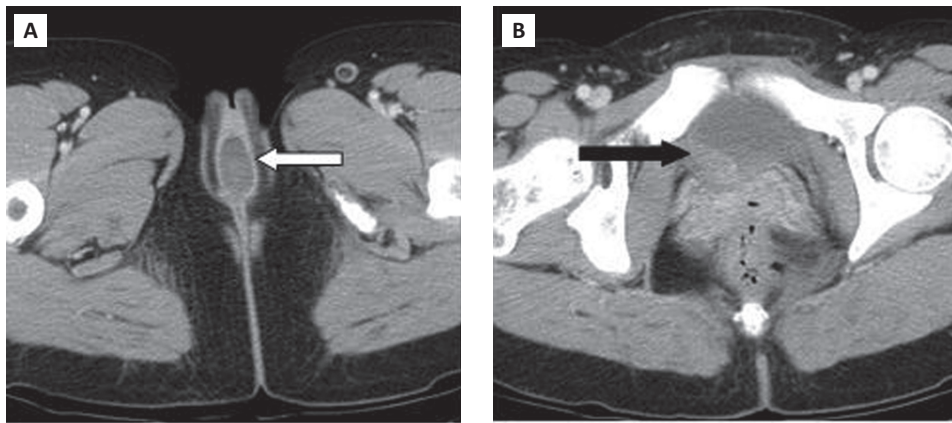


Figure 2 (A) Computed tomography scan showing a cyst-like lesion with mild attenuation around the urethral meatus (white arrow) and (B) thickening of the right posterior bladder wall with mild attenuation (black arrow).

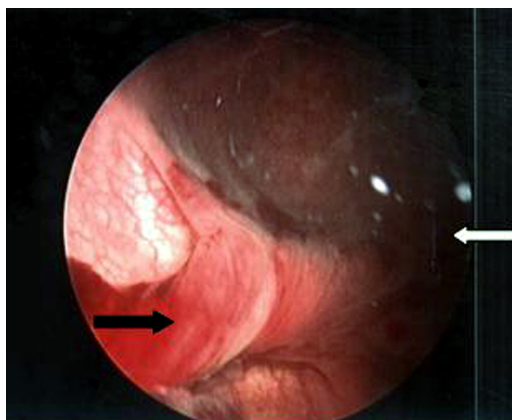


Figure 3 A soft tissue mass (white arrow) in the right posterior bladder wall, connected to the protruding mass by a stalk (black arrow).

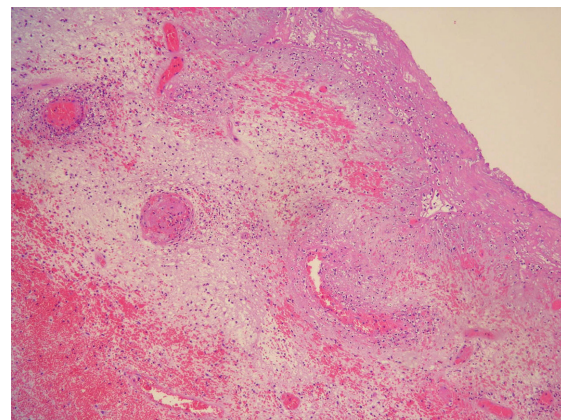


Figure 4 Microscopically, the polypoid mass showed mixed neutrophils, lymphocytes, and plasma cell infiltration in edematous and hemorrhagic stroma. The overlying urothelium is denuded (magnification, 100×).

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diagnosis of polypoid cystitis relies on recognition of an inflamed background that is edematous or densely fibrous with predominantly simple, non-branching, broad-based fronds of relatively normal-thickness urothelium at low magnification.⁵ A large polypoid mass of up to 5 cm in diameter was reported by Kim et al.⁶ However, to our knowledge, there are no reports of polypoid cystitis with a mass so large that it prolapsed out of the urethral meatus.

Urethral masses are not common in clinical practice. Masses with bladder origins are even rarer. Vesical papillomas, fibromyxomas, leiomyomas, and hematomas are known to prolapse from the external urethral orifice. Other differential diagnoses of a urethral mass include urethral prolapse, a diverticulum, urethral caruncle, Skene's duct cyst, Gartner's duct cyst, Müllerian remnant cyst, epithelial inclusion cyst, ectopic ureterocele, congenital paraurethral cyst, vaginal neoplasm, fibrous polyp, urethral carcinoma, and mesenchymal tumor.⁷⁻⁹ Clinical symptoms and physical findings, as well as a histopathological examination, are necessary for the correct diagnosis of polypoid cystitis.

Voiding difficulty with abdominal straining indicates bladder-outlet obstruction. In females, besides external sphincter hyperactivity and urethral stricture, obstruction above the bladder neck by an occult mass is another possible but seldom-mentioned cause. In our patient, the inflammatory mass caused obstructive symptoms such as abdominal straining, a weak stream, and urinary hesitancy for 1 week and then it protruded from the urethra. After immediate insertion of a Foley catheter to relieve the acute urinary retention, imaging studies, such as sonography, a CT scan, or magnetic resonance imaging, should be arranged. Cystoscopy is necessary for exploration and

treatment. After resection of the mass, close follow-up of the clinical course is essential.

In conclusion, polypoid cystitis, presenting as a protruding urethral mass, is extremely rare. This case highlights that polypoid cystitis can be a differential diagnosis in female patients with voiding dysfunction. A detailed history, physical examination, cystoscopic evaluation, and histopathological features are all helpful for a diagnosis.

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Author Queries

AQ1: Do you mean "stroma" instead?

AQ2: Do you mean fibromyomas?

AQ3: Correct meaning?

AQ4: Correct?