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A rare case of urethral fibroepithelial polyp in a young boy

Eyup Burak Sancak [a], Bilgehan Ozaydin [b,*], Aysel Guven Bagla [c]

[a] Department of Urology, Faculty of Medicine, Canakkale Onsekiz Mart University, 17100, Canakkale, Turkey
[b] Faculty of Medicine, Canakkale Onsekiz Mart University, 17100, Canakkale, Turkey
[c] Department of Histology and Embryology, Faculty of Medicine, Canakkale Onsekiz Mart University, 17100, Canakkale, Turkey

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ABSTRACT

Urethral fibroepithelial polyps are uncommon benign tumors. The clinical presentation comprises of acute urinary retention, obstructive bladder symptoms such as frequent urination and urination difficulties, and hematuria. Usually, the diagnosis is made through the use of ultrasonography, voiding cystourethrography, and urethrocystoscopy. This study presents a case report of a four-year-old patient with urinary retention and frequent urination symptoms who was diagnosed with a urethral fibroepithelial polyp in the light of the literature.

1. Introduction

Urethral fibroepithelial polyps are infrequent benign neoplasms originating in mesenchymal tissue. These polyps are most typically found in the posterior urethra.[1] Rarely can they be found in the renal parenchyma and bladder. Their occurrence is high during the initial ten years of an individual's life and is more prevalent in the male population.[2] The most common histological pattern is polypoid lesions with club-like projections resembling a clover leaf.[3] While the etiology of this condition remains uncertain, various factors such as congenital, infective, irritative, traumatic, and obstructive causes have been proposed.[4] However, in pediatric cases, congenital factors appear to be more common. The primary differential diagnoses in the case of fibroepithelial polyps comprise blood clots, posterior urethral valve, urothelial papilloma, papillary/polypoid cystitis, florid cystitis cystica et glandularis, inverted papilloma, and bladder rhabdomyosarcoma.[5] The most frequent initial symptoms are acute urinary retention, hematuria, recurrent urinary infections, and dysuria.[6] In our case, the patient presented similar signs and symptoms.

2. Case presentation

A four-year-old boy presented with symptoms of urinary retention, frequent urination, and flank pain. The physical examination revealed the presence of tenderness in the bilateral costovertebral angle. The results of the urine test and serum creatinine were both normal. The patient was examined using *ultrasonography* to assess the *sonographic* findings of the kidneys. The sonographic findings showing the size of the kidneys, in this case, are as follows 74.8 mm length, 11.3 mm parenchymal thickening of the right kidney, and 78.1 mm length and 12.1 mm parenchymal thickening of the left kidney. The echogenicity of the renal parenchyma was normal. Ultrasound revealed that the kidneys had minimal dilatation, and minimal dilatation persisted in the ureter. There was an increase in the thickness of the bladder wall (3 mm). The uroflowmetry test resulted in findings of a maximal urine flow rate of 8 ml/sec, which presented with stenotic. The uroflowmetry test resulted in findings of a maximal urine flow rate of 8 ml/sec, which presented with stenotic characteristics. In addition, approximately 20 ml of residual urine was observed. Due to the patient's flank pain, extremely low urinary flow rate, and the presence of residual urine, voiding cystourethrography was not performed. The patient underwent cystourethroscopy under general anesthesia following the prediagnosis of the posterior urethral valve. During the cystourethroscopy procedure, an approximately 1–2 cm-diameter polypoid mass was identified. As illustrated in Fig. 1, this mass was observed to extend from the verumontanum to the bladder and was found to almost wholly obstruct the bladder neck. The presence of a mass in the bladder caused the trabeculation, resulting from obstruction. The procedure of total transurethral resection of the lesion has been performed. The results of the histopathological analysis indicated that the lesion was a polyp lined with squamous epithelium and covered with a smooth muscle layer. Notably, no evidence of malignancy was detected.

Following the endoscopic resection of the polyp, the patient's symptoms improved and the Qmax value demonstrated a normal bell

* Corresponding author.
E-mail address: drbilgehanozaydin@gmail.com (B. Ozaydin).

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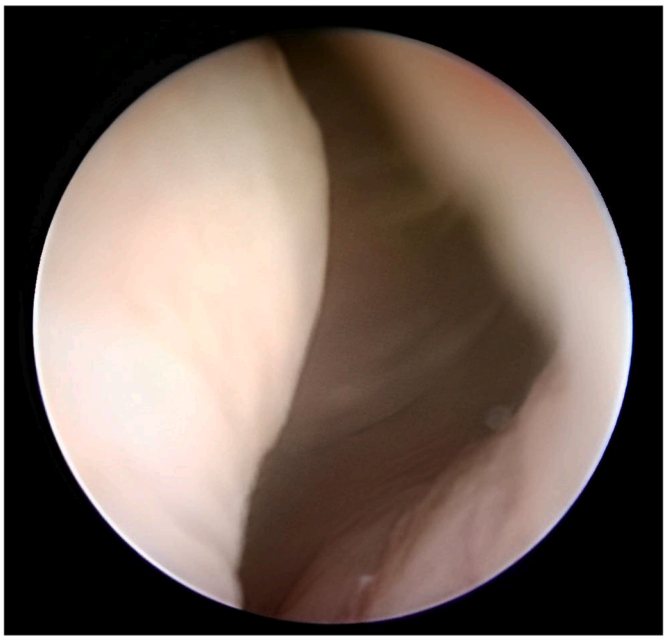

Fig. 1. Cystourethroscopy revealed a polypoid mass rising from the verumontanum and extending into the bladder.

curve tracing at 14 ml/sec. No urinary residue detected.

3. Discussion

Urethral fibroepithelial polyps are rarely seen benign polypoid urethral lesions. They are common during the first decade of life and in males. In the majority of pediatric cases, polyps originate from the verumontanum, similar to the one that was present in our case.

Due to the shortage of reported cases in the medical literature and the lack of specific symptoms, many clinicians do not initially consider this condition in their differential diagnosis. Despite its rarity, the symptoms it causes are why patients seek treatment. In adults, hematuria is the most common reason for hospitalization, whereas in children, obstructive symptoms are more prevalent. Every child with recurrent intermittent urinary retention, hematuria, and lower urinary tract symptoms should be evaluated for a urethral polyp.

Voiding cystourethrography and ultrasonography are viable diagnostic tools, while cystourethroscopy is recommended for definitive diagnosis and confirmation.

It is important to distinguish posterior urethral polyps from other conditions such as posterior urethral valve, blood clot, polypoid/papillary cystitis, urothelial papilloma, florid cystitis cystica et glandularis, inverted papilloma, and rhabdomyosarcoma of the bladder in pediatric patients who exhibit obstructive symptoms.[1]

Endoscopic resection is used as a treatment modality. The standard treatment for the lesion is transurethral resection. Only when the lesion cannot be removed transurethrally is open surgery performed. Upon conducting literature reviews, it was found that no instances have been identified in which the posterior urethra-bladder neck was almost completely obstructed by tissue resembling that of the prostate in adult individuals. It is intended to be published as a lesion to be considered in the differential diagnosis of the posterior urethral valve in children with urinary difficulties.

4. Conclusion

Though relatively rare, the diagnosis of urethral polyps in pediatric patients presenting with intermittent urinary retention, hematuria, and lower urinary tract symptoms should not be disregarded. At times, it can be enormous enough to obstruct the bladder neck totally and result in upper urinary system complaints. Ultrasonography and voiding cystourethrography can be used to diagnose, but urethrocystoscopy is required for conclusive diagnosis. The utilization of transurethral polyp resection has been revealed to be a safe and effective approach to managing fibroepithelial polyps.

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