Prostatic polyp presenting in a young boy with urinary symptoms

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ABSTRACT

Congenital urethral polyps are a rare anomaly of the urethra seen primarily in male children that present most commonly with features of voiding dysfunction or urinary obstruction. We report a case of a young boy with a posterior urethral polyp presenting with urinary retention, hematuria, and constipation. We also report a new treatment approach to this rare and challenging clinical finding.

1. Introduction

Genitourinary polyps can be found anywhere from the middle calices of the kidney to the anterior urethra. Lower urinary tract polyps are less common than those derived from the upper urinary tract. Lower tract genitourinary polyps are more common in children than adults and in boys than girls.\textsuperscript{1} Urethral polyps in boys are almost always congenital, though irritative, infectious, obstructive, and traumatic causes have been proposed.\textsuperscript{1} The most common presenting symptoms are hematuria, urinary tract obstruction causing acute urinary retention, and loin pain due to secondary vesicoureteral reflux.\textsuperscript{2–4} While rare, urethral polyps are an important consideration in the differential diagnosis of lower urinary tract obstruction. Previous case reports have discussed primarily endoscopic techniques for removal. We describe a case of a young boy presenting with genitourinary symptoms found to have a posterior urethral polyp and our novel treatment approach with colonoscopy snare.

2. Case presentation

A 3 year old male was referred for urinary hesitancy and bladder mass. He was previously seen 17 months earlier at another hospital with difficulty voiding that was felt to be due to constipation. He required catheter placement for urinary retention at his first presentation. After catheter removal he developed hematuria and there was continued concern for possible clot in bladder. A renal ultrasound was performed and showed concern for possible bladder lesion vs. hematoma vs. blood clot (Image 1). Prior to presentation to our facility he was seen two other times with constipation and difficulty voiding requiring catheter placement. A lumbar spine MRI was done to assess for neurogenic cause of bowel dysfunction which showed a persistent mass at the bladder neck that was unchanged in size, prompting urology referral (Image 1). Urology performed a cystoscopy which showed a normal anterior urethra and a large mass extending into bladder with narrow stalk just proximal to the verumontanum (Image 2). The bladder was grossly normal with mild trabeculation. Pediatric resectoscope loop was too small to pass around the large mass at verumontanum. Therefore, polyp was removed by using a colonoscopic snare loop through the pediatric cystoscope. Initial frozen pathology suggested a benign polyp. The resectoscope was then used to further resect the base of the polyp from posterior urethra. He was seen 2 weeks later with report that his voiding symptoms had completely resolved with no straining or urinary retention. Final gross pathology showed a specimen with polypoid portions of tissue covered by smooth pale pinkish white mucosa. Histologically, loose edematous, vascular stroma was seen with a sparse chronic inflammatory infiltrate, covered by benign urothelium (Image 3), consistent with benign epithelial polyp. Renal ultrasound was repeated 1, 6, 12, and 24 months post operatively with normal kidneys bilaterally and no residual or recurrent mass seen at bladder neck. He continues to void well with no residual issues. Plan is to continue with another annual visit with renal ultrasound.
3. Discussion

Generally, boys with posterior urethral polyps present initially with urinary outflow obstruction/retention symptoms. A precise history, physical examination, and uroflowmetry patterns in toilet-trained children can indicate urethral polyps, however imaging is the most important diagnostic test. The classic radiographic finding is a rounded moveable filling defect in the prostatic urethra, which differentiates it from other forms of obstruction in this area. The diagnosis must be confirmed by endoscopic approach with cystoscopy.

As pediatric endoscopic equipment progresses, transurethral resection of a urethral polyp has become the intervention of choice. Endoscopic resection using electrocautery or laser energy has been reported in previous series, though some polyps are unsuitable for endoscopic removal due to their smooth surface and tense structure; or when the polyp length is greater than 3 cm. Historically, in these cases an open cystostomy and excision was necessary. In the case presented here we were unable to use the standard endoscopic technique due to the resectoscope bipolar loop being of insufficient size to pass around the polyp. However, we were able to use a snare loop passed through...
cystoscope. This worked very well and the polyp was then able to be removed in one piece for frozen section. Previous case reports have proposed post-operative follow-up including a symptom history, urinary tract sonography, and uroflowmetry screening annually up to 3 years and voiding cystogram in children with preoperative reflux, as the protocol for children after urethral polyp excision.5 Our patient has shown normal renal ultrason sounds to date and subjective improvement in his voiding symptoms. We plan to continue annual assessment to 3 years as proposed.

4. Conclusion

Posterior urethral polyps should be considered in young male patients presenting with obstructive urinary symptoms, especially when a bladder mass is incidentally seen on imaging. It is feasible to use snare loop endoscopically for large polyps with a narrow base.

Consent

Informed consent was obtained from the patient’s for publication of the case details.

Declaration of competing interest

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