Management of male urethral polyps in children: Experience with four cases

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ABSTRACT

Congenital urethral polyps area rare anomaly of the male urethra that may present with features of voiding dysfunction or obstruction. Although the exact incidence is unknown, they are important in the differential diagnosis of lower urethral obstruction in male children. Their diagnosis requires a high index of suspicion because of the variability of presentation. We present our experience with four cases of male urethral polyps in boys with discussion on the related literature.

Key words: Children, lower urinary tract obstruction, urethral polyp

INTRODUCTION

Urethral polyps are a rare unusual benign anomaly of the male posterior urethra.[1] Polyps most commonly arise from the verumontanum and are typically covered with transitional epithelium over a fibromuscular core. The presenting symptoms for most patients include urinary retention, straining to void, urgency, stranguria and haematuria.[2] This report discussed the variable presentations and management of male urethral polyps in boys and added to the existing literature of urethral polyps in boys.

CASE REPORTS

Case 1

A 6-year-old boy presented with urinary retention of 1 day duration. Physical examination revealed no abnormalities and the laboratory profile was unremarkable. Transabdominal ultrasonography reveled the presence of a small polypoidal growth (8 mm) in the urethra projecting into the bladder and a computerized tomography (CT) scan reveled a hypodense lesion measuring 0.5 X 1 cm in the bladder base [Figure 1] while ascending urethrography reveled the presence of a filling defect in the bladder base.

Cystourethroscopy revealed a urethral polyp protruding from the verumontanum, with free bladder mucosa and normal ureteric orifices. The polyp was excised using a resectoscope and the patient did well.

Case 2

A 12-year-old boy presented with right loin pain of 1 year duration, had versicoureteric reflux diagnosed at 5 years and past history of left orchidopexy performed at 6 years of age. Clinical examination revealed left groin scar. Laboratory profiles were unremarkable. During cystourethroscopy, a posterior urethral polyp originating from the verumontanum was accidentally discovered. Radiological investigations showed that the reflux had disappeared. The polyp was excised with a resectoscope. The histopathological examination revealed fibroepithelial polyps with no evidence of malignancy. Postoperative course was uneventful.

Case 3

A 1-year-old boy presented with acute urinary retention of 2 days duration with irrelevant past medical and surgical history. Clinical examination and laboratory evaluations were unremarkable. Voiding cystourethrogram (VCUG) [Figure 2] and magnetic resonance imaging (MRI) [Figure 3] showed a filling defect at the base of the bladder. Cystourethroscopy revealed a polyp arising from the prostatic urethra just beside the midline to the left protruding through the bladder neck. Resection using a resectoscope was carried out. The histopathology finding was fibroepithelial polyps with no evidence of malignancy.

Case 4

A 3-year-old boy presented with indwelling urethral catheter because of urinary retention since 3 months

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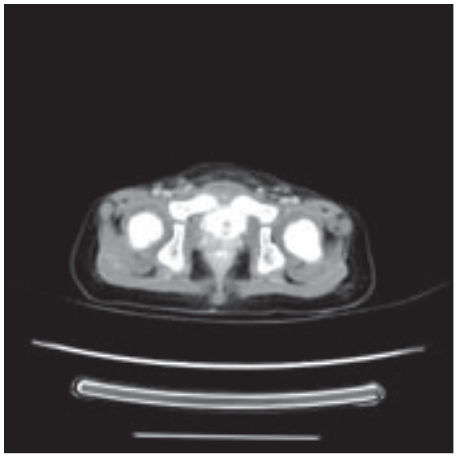


Figure 1: Computerized tomography (CT) scan reveled hypodence lesion measuring 0.5X 1 cm in the bladder base



Figure 2: Voiding cystourethrogram (VCUG) showing filling defect at the base of the bladder

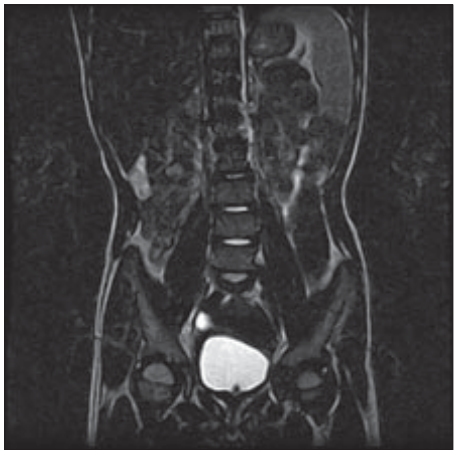


Figure 3: Magnetic resonance imaging showing filling defect at the base of the bladder

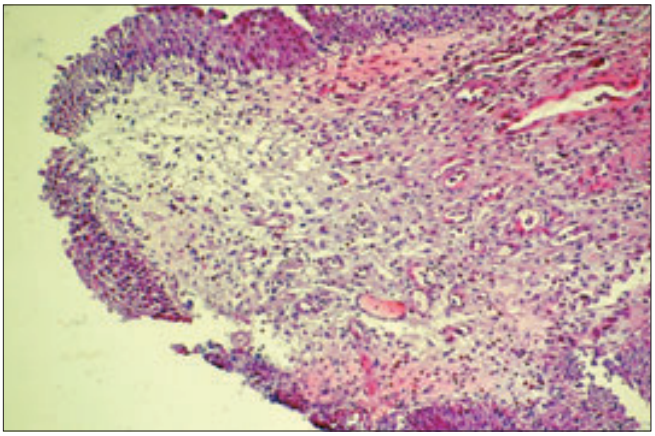


Figure 4: Histopathology examination confirming benign urethral polyp with no evidence of malignancy (H & E stain, 20x objective)

with irrelevant medical and surgical history. Clinical examination and laboratory parameters were essentially normal. VCUG was normal. Cystourethroscopy showed a normal anterior urethra and a polyp arising from the verumontanum. Resection of the polyp was performed using a resectoscope. Histopathology examination confirmed a benign urethral polyp with no evidence of malignancy [Figure 4].

DISCUSSION

Urethral polyps are a rare anomaly of the male urethra. The exact incidence is not known but it has been on the increase in the last 20 years owing to better diagnostic techniques.[3] Half of the cases reported by Tsuzuki *et al.*[3] were discovered without any symptoms, suggesting that fibroepithelial polyps are more common than the incidence reported in the clinical literature, although they are still rare.

The aetiology of urethral polyps is still controversial. Congenital, infective, irritative, infectious, traumatic and obstructive causes have been proposed.[4] The presence of a large polyp in healthy newborns and infants is a strong argument in favour of congenital origin.[5] They may arise as a result of developmental error in the invagination process of the glandular material of the inner zone of the prostate.[2] Downs[4] postulated that the polyps resulted from a defective protrusion of the urethra wall because of vestiges of the Muller' while Kuppusami *et al.*[6] speculated that maternal oestrogen might effect secondary epithelial change. Another consideration by Lou *et al.*[7] is that of a congenital anomaly, which has been the most popular concept. Redman *et al.*[8] claimed that anterior urethral polyps have all risen from the dorsal 12-0'clock position deep in the bulbar urethra. Interestingly, some of the cases that were reported as "congenital" fibroepithelial polyps showed their first clinical symptoms in adolescence or adulthood.[3,4] Three of the four cases presented within the first 6 years while one case presented at 12 years.

The most important differential diagnoses of fibroepithelial polyps include blood clot, posterior urethral valve, florid cystitis cystica et glandularis, polypoid/papillary cystitis, urothelial papilloma, inverted papilloma and rhabdomyosarcoma of the bladder.[3,9]

The chief clinical symptoms are intermittent or acute urinary retention, postvoid dribbling, urinary tract infection, dysuria, urinary urgency and hesitancy, terminal haematuria and incomplete bladder emptying, enuresis.[1,3,9] It may be asymptomatic[3,5] or present as prolapsing mass through the urethra.[7] The second patient in this report did not have symptoms of lower urinary obstruction. In about 50% of the cases, patients with urethral polyps have associated pathology, especially vesicoureteral reflux, as in Case 2 in the present report.[1] Some patients also have associated hypospedias, unilateral hydronephrosis[5] and bladder diverticulum. Unlike urethral valves, polyps do not damage the urinary tract.[9] Urethral polyps have been reported from neonatal life to patients who are 70 years of age.[3,5]

VCUG often shows a filling defect in the urethra [Figure 2], which may vary in location.[4,8,9] The lesion may also be detected by ultrasonography.[8] The diagnosis is then confirmed by urethrocystoscopy, which will show the origin, shape and size of the polyp.[8,9] Additional imaging such as noncontrast CT scan [Figure 1] and MRI [Figure 3] may be helpful in ruling out the differential diagnosis.[2] Ultrasonography showed the polyp only in Case 1 while VCUG showed the lesion in Cases 1 and 3 and urethrocystoscopy was diagnostic in all four cases and remains the diagnostic investigation.[8,9]

Endoscopic resection electrocautery, cold knife or laser is usually successful and open cystostomy is rarely required.[1,2,9] All the patients treated so far did well postoperatively. Only one patient with urethral polyp has been reported to have recurrence after initial resection and this occurrence is only in the posterior urethra.[10]

Histopathologically, urethral polyps are described as benign polyps composed of fibrous core covered by normal transitional urothelium [Figure 4] and sometimes areas of squamous metaplasia and ulceration can be found.[3] The histopathology results of the four cases in this report confirmed fibroepithelial polyps with no evidence of malignancy.

Urethral polyps, although uncommon, are more common in males than in females. The incidence may not be as low as reported. They should be considered in the differential diagnosis of lower urethral obstruction in male children. A high index of suspicion and possibly screening may be of help in knowing the exact incidence.

REFERENCES

1. De Castro R, Campobasso P, Belloli G, Pavanello P. Solitary polyp of the posterior urethra in children: Report on seven cases. Eur J Pediatr Surg 1993;3:92-6.
2. Walsh IK, keane PF, Herron B. Benign urethral polyps. Br J Urol 1993;72:937-8.
3. Tsuzuki T, Epstein JI. Fibroepithelial polyp of the lower urinary tract in adults. Am J Surg Pathol 2005;29:460-6.
4. Downs RA. Congenital polyps of the prostatic urethra: A review of literature and report of two cases. Br J Urol 1970;42:76.
5. Tsuang W, Rapp DE, Feinstein KA, Orvieto MA, Close CE. Urethral polyp in asymptomatic male infant with prenatal hydronephrosis. Urology 2006;67:1085e9-e11.
6. Kuppusami K, Moors DE. Fibrous polyp of the verumontanum. Can J Surg 1968;11:388-9.
7. Lou ES, Newman H, Levitt SB. Prolapsing urethral polyp in child with hypospadias. Urology 1977;9:423-4.
8. Redman JF, Lightfoot ML. Congenital posterior urethral polyp in a boy. Urology 2003;61:460-1.
9. Casale AJ. Posterior urethral valves and other urethral anomalies. Wein AJ, Kavoussi LR, Novick AC, Partin AW, Peters CA, editors. Campbell's urology. Vol. 49th ed. W.B. Saunders; 2007. p. 3583-603.
10. Frates RE, DeLuca FG. Urethral poypys in children. Radiology 1967;89:289.

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