African Urology 2023;3:53-54
https://doi.org/10.36303/AUJ.0044

AFRICAN UROLOGY
ISSN 2710-2750 EISSN 2710-2750

CASE REPORT

Voiding lower urinary tract symptoms in a young female due to a large cecoureterocele – a rare presentation

V Kumar,[1] RK Gupta,[2] P Tejasvi[2]

[1] *Department of Urology and Renal Transplant, VMMC and Safdarjung Hospital, India*
[2] *Department of Urology and Renal Transplant, Andhra Medical College, India*

Corresponding author, email: access_vinod@yahoo.com

Ureterocele refers to cystic dilation of the distal part of the ureter. The clinical entity has varied presentations from an incidental finding to flank pain, recurrent urinary tract infections (UTIs) and lower urinary tract symptoms. Whereas ureteroceles are uncommon in the adult population, a cecoureterocele is an extremely rare presentation. We discuss the management of a large cecoureterocele in a 22-year-old female presenting with voiding lower urinary tract symptoms.

Keywords: female, urinary bladder, cecoureterocele, voiding, lower urinary tract symptoms

Case report

Ureterocele refers to the cystic dilation of the distal lower ureter that is located within the bladder or spans the bladder and the urethra.[1] Cecoureteroceles have the orifice of the affected ureter in the bladder but the cavity of the ureterocele extends submucosally beyond the bladder neck into the urethra.[2] Due to the rarity of this condition, there is sparse data in the literature regarding its management. In this article we present the case of a 22-year-old female with voiding lower urinary tract symptoms (LUTS) due to a large cecoureterocele, and we discuss its management options.[3,4]

A 22-year-old female presented to our outpatient department at Safdarjung Hospital, New Delhi, complaining of dysuria associated with voiding LUTS in the form of poor flow, intermittency, straining and hesitancy during micturition for the past two years.[5] She also complained of a small soft, pinkish round mass protruding through the urethra intermittently during micturition, which she used to reduce by digital manipulation. She also complained of intermittent right flank pain radiating to the right iliac fossa which was colicky in nature and relieved with analgesics for the past two years.

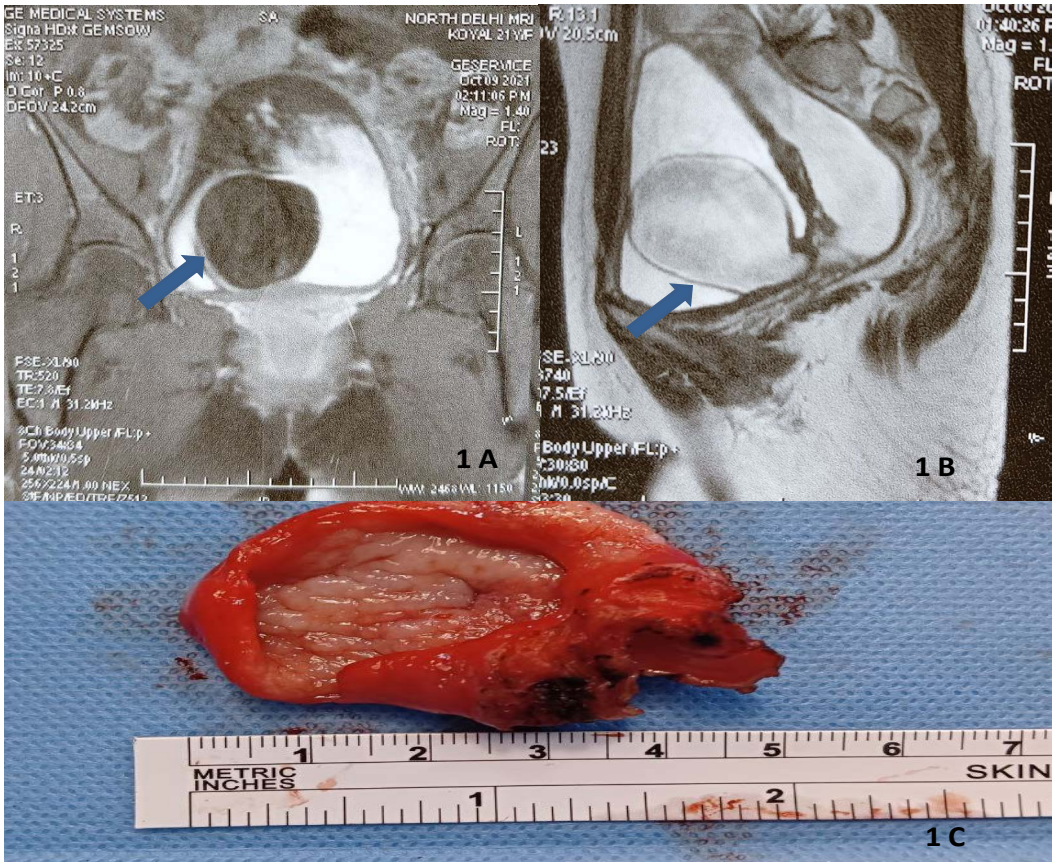

Figure 1: A and B – Transverse and sagittal section of the large right-sided ureterocele (bold arrows) (6 x 5 cm) with cobra head appearance; dilation of right ureter is visible in coronal section; C – excised right-sided cecoureterocele

On examination, a small pinkish mass was found protruding through the external urethral meatus on straining, which was reducible on digital manipulation. Her urinalysis was normal and urine culture showed no growth.

Ultrasound of the kidney ureter bladder (KUB) region showed right gross hydroureteronephrosis with thinned out parenchyma with dilation of the intramural portion of the distal ureter.

Magnetic resonance imaging (MRI) of the abdomen and pelvis revealed right gross hydroureteronephrosis with thinned out parenchyma. The distal ureter was dilated and projecting into the urinary bladder, leading to a cobra head appearance. The finding was suggestive of a large ureterocele of 6 x 5 cm in size as depicted in Figure 1A and Figure 1B**.** Post-contrast images did not show any enhancement of the lesion. There was no evidence of stone disease or any associated anomaly like ectopic ureter, duplex kidney or vesicoureteric reflux.

A functional study of the kidney was done in the form of a diethylene-triamine penta-acetic acid (DTPA) scan. It showed impaired cortical function of the right kidney (glomerular filtration rate [GFR] – 16.68 ml/min) with slow drainage. The contralateral kidney had good function (GFR – 77.37 ml/min) and non-obstructed drainage.

Cystoscopy revealed a large right-sided cecoureterocele with a patulous right ureteric orifice protruding into the urethra.[6]

Transurethral incision of the ureterocele along with right double J (DJ) stenting followed by DJ stent removal after two weeks was done but her symptoms persisted and hence she was planned for open transvesical excision of the ureterocele.

She underwent open transvesical ureterocele excision (Figure 1C) with right ureteric excisional tapering and reimplantation by the Politano-Leadbetter technique along with right DJ stenting which was removed after three weeks. At three months post-surgery she was completely relieved of her flank pain. Her flow pattern also improved with no complaints of voiding LUTS and negligible post-void residual urine. There was also no episode of urinary tract infection (UTI) post-intervention.

Discussion

The incidence of ureterocele has been reported to be 1 in 4 000 in autopsy cases studied by Campbell[7] and between 1 in 5 000 and 1 in 12 000 in general paediatric admissions by Malek.[8] Uson reported a much higher incidence of 1 in 500, suggesting that in previous studies some small ureteroceles were missed.[9] The exact incidence of cecoureterocele is unknown. The entity is more common in females than males.

Ureterocele presentation varies from asymptomatic incidental finding to recurrent UTI, renal dysfunction, flank pain, haematuria, dysuria and voiding LUTS. In addition, the cecoureterocele variant commonly presents as a prolapsing soft tissue mass from the urethral meatus. The diagnosis is clinched on history, examination and imaging studies. The management has to be individualised depending upon age, clinical presentation, type of ureterocele, renal function and presence or absence of infection.

Our patient presented with a history of right flank pain, dysuria and voiding LUTS for two years duration along with a history of a soft tissue mass prolapsing through the urethra intermittently during micturition.

The patient was initially managed by transurethral incision of the ureterocele with slight improvement in her voiding symptoms, but her soft tissue prolapse during micturition persisted along with residual voiding symptoms. She was offered transvesical excision of the ureterocele with excisional tapering of the ureter by means of the Hendren procedure and ureteric reimplantation using the Politano-Leadbetter technique with improvement in her symptoms. The patient was doing well in follow-up at three months as evidenced by relief in flank pain, improvement in voiding LUTS and nil post-void residual urine.

Transurethral incision is the standard first-line treatment for ureteroceles. When associated with duplex system and non-functioning upper pole moiety, upper pole nephrectomy, ureterocele excision and common sheath reimplantation is the standard option. This is challenging in cases of cecoureteroceles as the distal part of cecoureteroceles can act like an obstructing flap valve during voiding. This is usually dealt with by cecoureterocele resection by gentle traction or closure of the opening in two layers or by fulguration. In the reported case, the cecoureterocele was initially managed with a transurethral incision, which, upon failure, was managed by open transvesical excision of the ureterocele with ureteric reimplantation. Hence, in the management of such challenging large cecoureteroceles, patients should preferably be offered transvesical excision of the ureterocele with ureteric reimplantation as the first choice.

Conflict of interest

The authors declare no conflict of interest.

Funding source

None.

Ethical approval

Patient consent taken.

ORCID

V Kumar https://orcid.org/0000-0003-0223-2764

References

1. Peters CA, Mendelsohn C. Ectopic ureter, ureterocele, and ureteral anomalies classification and anatomic description. General Patterns. In: Wein AJ, Partin AW, Peters CA, editors. Campbell-Walsh's Urology. 11th ed. Philadelphia: Elsevier Sunders; 2016. p. 3075-95.
2. Raphael JE, Wakama I. Prolapsed cecoureterocele an unusual cause of female acute urinary retention: case report and review of the literature. Saudi J Med. 2022;7:105-8. https://doi.org/10.36348/sjm.2022.v07i02.003.
3. Abraham N, Goldman HB. Transurethral excision of prolapsed ureterocele. Int Urogynecol J. 2014;25:1435-6. https://doi.org/10.1007/s00192-014-2419-5.
4. Chowdhary SK, Kandpal DK, Sibal A, Srivastava RN. Management of complicated ureteroceles: Different modalities of treatment and long-term outcome. J Indian Assoc Pediatr Surg. 2014;19:156-61. https://doi.org/10.4103/0971-9261.136471.
5. Stunnel H, Barrett S, Campbell N, Colhoun E, Torreggiani WC. Prolapsed bilateral ureterocele leading to intermittent outflow obstruction. JBR-BTR. 2010;93:312-13. https://doi.org/10.5334/jbr-btr.349.
6. Mohta A, Upreti L. Cecoureterocele. Indian Pediatr. 2010;47:522-3.
7. Campbell M. Ureterocele: a study of 94 instances in 80 infants and children. Surg Gynecol Obstetr. 1951;93:705-18.
8. Malek RS, Kelalis PP, Sticker GB, Burke EC. Observations on ureteral ectopy in children. J Urol. 1972;107:308-11. https://doi.org/10.1016/s0022-5347(17)61012-7.
9. Uson AC, Lattimer JK, Melicow MM. Ureteroceles in infants and children: a report based on 44 cases. Pediatrics. 1961;27:971-6.