CLINICAL CASE

Giant ureterocele: a case report


Department of Urology, Hospital Médica Londres, Mexico City, Mexico

KEYWORDS
Ureterocele; Giant; Decompensated bladder; Orthotopic; Mexico.

Abstract  Ureterocele is a cystic dilatation in the terminal section of the ureter that is located inside the bladder, the urethra, or both. Incidence in relation to autopsy is 1:500; women are more affected with a 6:1 woman/man ratio.

The aim of the present article was to describe a case of a giant ureterocele with a strictured, intravesical single system on the left side, in an 18-year-old patient presenting with storage symptomatology.

An 18-year-old male patient presented with obstructive urinary symptomatology and gross hematuria. An excretory urogram showed obstructive uropathy of the left kidney, with a filling defect at the bladder level, and an intravesical saccular image revealing the presence of post-micturition residual urine. Cystoscopy identified a decompensated bladder and a left-side giant ureterocele. Transvesical ureterocelectomy showed a single system intravesical ureterocele taking up more than half of the entire bladder, with a strictured opening. The ureterocele was resected and a left ureteral stent was placed.

In adults in our medical environment, single orthotopic ureterocele is the most frequent, 18% are bilateral, and a little over 10% are found at other sites. In the presence of such diverse clinical manifestations, diagnosis should be suspected in different situations. In the present case, the symptomatology presented due to the obstruction toward the bladder neck caused by the ureterocele, along with the added urinary infection.

* Corresponding author: Londres N° 38, 5to piso, Colonia Juárez, Delegación Cuauhtémoc, C.P. 06600, México, D.F., México. Telephone: 5514 9896. Email: hibertfuzz@hotmail.com (H. Castellanos-Hernández).
Introduction

Ureterocele is a cystic dilatation of the terminal portion of the ureter that is located inside the bladder or the urethra, or both. Its incidence at autopsy is 1:500; it affects women more than men, with a 6:1 ratio.

In our environment, it has a frequency of 7 out of every 10 million children under the age of 6 years.

It is a congenital pathology that has been attributed to the delayed rupture of the Chwalla membrane that divided the Wolffian duct from the urogenital sinus at the time the ureteral sac was forming during embryonic development.

Case presentation

An 18-year-old male with no past medical history relevant to his present condition, had disease onset 6 months before, presenting with obstructive lower urinary tract symptoms characterized by intermittence, straining to urinate, incomplete emptying sensation, and urinary frequency; 3 weeks before he was examined, the patient presented with total gross hematuria with no coagulates, and pain upon micturition; he was prescribed antibiotic therapy and the symptoms desisted. Physical examination revealed a soft, depressible, non-painful abdomen; in relation to the genitourinary system, he presented with a penis with a central meatus, retractive prepuce, and testes of normal size and shape within the scrotal sac. Digital rectal examination showed a smooth, non-suspicious prostate and the bulbocavernous reflex was present. The patient arrived with an excretory urogram that revealed obstructive uropathy of the left kidney, with a filling defect at the bladder level and an intravesical saccular image (fig. 1). Post-micturition residual urine was also visible (fig. 2). The patient underwent cystoscopy, which identified a decompensated bladder with trabeculations and cells, as well as a giant left strictured ureterocele. The meatus could not be cannulated and endoscopic de-roofing was impossible, due to the large volume of the ureterocele that did not permit adequate visualization. A transvesical ureterocelectomy was performed that revealed a one-system intravesical ureterocele that took up more than half of the entire bladder space, with a strictured opening (fig. 3) and important thickening of the bladder muscle wall; the ureterocele was resected and a left ureteral stent was placed (fig. 4). The patient had satisfactory postoperative progression and was released from the hospital 4 days after the surgical procedure.

Discussion

Orthotopic and single types of ureterocele are the most frequent in our environment; 18% are bilateral, and slightly over 10% are located at other sites.

Because it has such diverse clinical manifestations, diagnosis should be suspected in a variety of situations. In the case presented herein, the symptomatology resulted from the obstruction toward the bladder neck caused by the ureterocele, along with added urinary infection. Once ureterocele is suspected, evaluation is a combination of imaging techniques that includes ultrasound, emptying cystography, excretory urography, and renal scintigraphy for assessing its repercussions. Computed tomography is also used, but it is regarded as the last option in the studies of choice. Cystoscopy can confirm radiologic findings, even though voluminous ureteroceles often make visualization difficult and lead to confusion.

Surgical management of the ureterocele is based on the general approach, which includes endoscopic treatment, upper tract procedures, and complete reconstruction.

Ureterocele gigante. Reporte de un caso

Resumen El ureterocele es una dilatación quirústica de la parte terminal del uréter, que se ubica dentro de la vejiga de la uretra o de ambas. Su incidencia en material de autopsia es de 1:500; afecta más al sexo femenino, en una proporción de 6:1.

El objetivo del presente trabajo es describir un caso de ureterocele, con sistema único intravesical estenótico gigante de lado izquierdo, en paciente de 18 años con sintomatología de almacencamiento.

Se presenta paciente masculino de 18 años de edad, con sintomatología urinaria obstructiva, así como hematuria macroscópica. En urograma excretor se observaba uropatía obstructiva de riñón izquierdo, con defecto de llenado a nivel vesical, y una imagen sacular intravesical con presencia de orina residual posmecical. Se sometió a cistoscopia, identificándose vejiga de esfuerzo, así como ureterocele gigante izquierdo, realizándose ureterocelectomía tranvesical, teniendo como hallazgo: ureterocele intravesical con sistema único, el cual ocupaba más de la mitad de la totalidad de la vejiga, con orificio estenótico, que se resecó y se colocó de tutor ureteral izquierdo.

En adultos de nuestro medio, la variedad ortotópica y única del ureterocele es la más frecuente, 18% son bilaterales siendo un poco mayor al 10%, señalado en otros sitios. Ante las manifestaciones clínicas tan diversas, el diagnóstico debe sospecharse en diferentes situaciones; en el caso que se presenta, la sintomatología estaba dada por la obstrucción que generó el ureterocele hacia el cuello vesical, así como infección urinaria agregada.
Intravesical ureterocele treatment selection is determined by the size of the ureterocele, the function, the degree of obstruction affecting the renal unit, and the vesicoureteral reflux.

Treatment directed at correcting a non-duplicated ureterocele located within the bladder when there is normal kidney function, is based on endoscopic incision and is generally the definitive treatment. Other authors prefer to carry out ureteral reimplant and excision of the ureterocele.

**Conclusions**

We presented the case of an adult patient with giant ureterocele, who had the clinical data of lower obstructive uropathy and hematuria, apparently secondary to an infectious process; this clinical presentation was uncommon.

**Financial disclosure**

No financial support was received in relation to this article.
Conflict of interest

The authors declare that there is no conflict of interest.

References


