Case Report

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Non-endoscopic management of a giant ureterocele: a case report in resource poor African hospital

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ABSTRACT

Ureterocele is a cystic dilatation of the distal sub mucosal part of the ureter. It is a congenital anomaly that may co-exist with other anomalies. It has an incidence 1 in 4000 live births. Patients present with symptoms at paediatric age or may remain asymptomatic till adulthood. Our 30 year old female patient was assessed for a giant orthotropic right ureterocele with obstructive uropathy, in a hospital that has no modern facilities for endoscopic treatment. She then had successful open surgical repair of the ureterocele with satisfactory outcome. Minimally invasive endoscopic treatment options remains the gold standard. Patients from poor resource regions can as well be treated successfully by open surgical repair like our index case presented.

Keywords: Case report, Obstructive uropathy, Ureterocele

INTRODUCTION

Ureterocele is a congenital cystic dilatation of distal sub mucosal portion of one or both ureters within urinary bladder. The incidence of ureterocele is estimated to be 1 in 4000 live births with a ratio of 4:1 in females to male respectively. It can be categorized according to ureterocele insertion as "orthotopic" in which the ureteric orifice is located in the normal anatomic position of the bladder trigone, or as "ectopic" ureterocele in which the orifice is located anywhere else. Other Categories of ureteroceles exist according to type of kidney drained either as "single" system or "duplicated" system with 2 ureters, in which one of the ureters is ectopic. Ureteroceles poses diagnostic challenge and management due to its variable presentations and types.

Ureterocele in adults causing ureteral obstruction are not common, and only few cases reported.³ Hence, we present this case of right ureterocele in female adult with upper tract obstruction, which was managed by open

surgery in our locality with limited facilities. Patient's consent and clearance from the hospital ethical committee were achieved.

CASE REPORT

A 30 year old female presented with 2 month history of right sided loin pain, colicky in nature. There was associated urinary frequency, dysuria, occasional passage of turbid urine, but non-bloody and no per vaginal discharge. She had fever. No associated past history of gynecological or other pelvic surgeries. On examination, she was fit looking with normal vital signs. Abdominal examination elicited vague tenderness in the right flank region, no palpable mass, the kidneys, liver and spleen were not enlarged.

An initial assessment of right pyelonephritis was made. Abdominopelvic ultrasound scan revealed right side obstructive uropathy with right ureterocele as shown in Figure 1. Electrolytes, urea and creatinine, Random blood

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sugar with packed cell volume were normal. She was treated with ciprofloxacin based on urine culture result.



Figure 1: Bladder ultrasound scan showing right side ureterocele as pointed by the arrow.

She then had intra-venous urography (IVU) which revealed hydronephrosis and hydroureter, including the distal end of the ureter, giving rise to the so called "cobra head" appearance as shown in Figures 2 and 3. The left kidney was normal. Other base line investigations were normal. Patient consented for open surgical repair. Intraoperative finding were that of large ovoid shape right ureterocele, bulging into the bladder, measuring 6 cm \times 3 cm in dimension. The left ureteric orifice and the bladder wall were normal. Marsupialization of the ureterocele was done, after an initial partial excision of the redundant wall of the ureterocele. The temporary ureteric stent was removed after 2 weeks post-operative, and she was doing well at 6^{th} month during follow up.

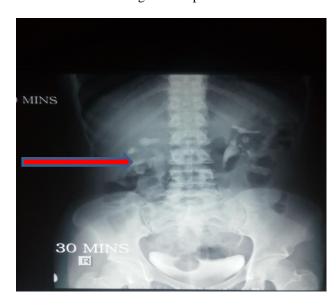


Figure 2: Intra-venous urography showing right side hydronephrosis pointed by the arrow.

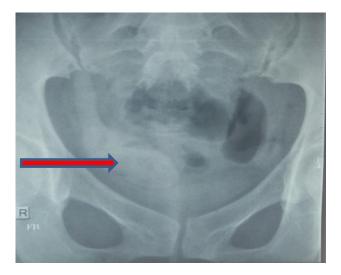


Figure 3: Dilatation of the distal end of ureter giving the "cobra head" appearance, as pointed by the arrow.

DISCUSSION

The aetiopathogenesis of ureteroceles is not well understood, however many proposed mechanisms exist with the incomplete dissolution of the chwalla membrane occurring during embryonic development the most accepted cause.²

Tanagho hypothesized that the distal ureteral segment, which is incorporated later into the developing urogenital sinus, may be acted on by the same factors that cause the expansion of the urogenital sinus to form the bladder together with a delay in establishing the lumen of the ureteral bud.⁴

Clinical presentation of ureteroceles are variable. In the paediatrics, it could complicate and present as symptoms of recurrent urinary tract infection including fever, failure to thrive or urolithiasis.⁵ In adults it can be asymptomatic or may present with flank pain, this is similar to our index case presented.⁶

Following evaluation, present index case was found to have an orthotropic ureterocele presenting with upper tract obstruction as demonstrated by the hydronephrosis in figure 2, and similar to the previous report.³ No any co-existing conditions in present case such as ureteral calculus, as seen in other studies.^{2,7}

Modern treatment of ureteroceles, particularly ureteroceles in adults like present index case include minimally invasive endoscopic unroofing using resectoscopes or even endoscopic technique of multiple punctures at the base of ureterocele using Holmium laser. Our centre is yet to have facilities for endoscopic intervention of ureterocele, hence we managed our case by open surgical repair. Open surgical repair of ureterocele has been previously studied.

CONCLUSION

Ureterocele is an uncommon abnormality. Early diagnosis can be difficult to achieve, particularly in the asymptomatic, hence high index of suspicion is relevant. The role of open surgery in management of ureterocele cannot be over-emphasized in developing and resources poor countries, where the cost of procuring gold stand endoscopy facilities is still a challenge.

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