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Case Report

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LATE PRESENTATION OF URETEROCELE IN AN ADULT MALE WITH DUPLEX COLLECTING SYSTEM. A RARE CASE REPORT

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ABSTRACT

Ureteroceles are caused by cystic distal ureter dilatation, which are typically observed in childhood (1). The adult manifestation is not common and can be a source of diagnosis and treatment difficulties (2). We describe a case of a 33-year-old man who has a history of intermittent left flank pain in 1 year. Computed tomography urography revealed a left complete duplex collecting system with severe hydronephrosis and hydroureter of the upper moiety, which is in line with a non-functioning segment on renogram (3). Obstructed left ureterocele was found to be large.The patient underwent cystoscopy and deroofing of the ureterocele under general anaesthesia. The intra-operative findings showed thick-walled intravesical ureterocele along with a dilated ureteric orifice that was removed with Collin knife (4). Recovery was without incident and patient was discharged in stable condition with clear urine output with follow-up imaging scheduled. This case shows the significance of ureterocele in the differentiation of adult patients presenting with chronic flank pain and hydronephrosis and that the obstruction can be relieved through timely treatment by use of endoscopic means and renal functionality can be maintained (5,6).

Keywords: Ureterocele**,** Cystoscopy, hydronephrosis, Urography.

INTRODUCTION

Ureterocele is a cystic dilatation of the distal ureter in the bladder, which occurs due to a malformation of the Chwalla membrane, which fails to recede (1). Its onset is usually observed in childhood when imaging is done to rule out urinary tract infection or hydronephrosis (2). Adult presentation is rare and might become difficult to diagnose, as the signs are vague, including flank pain or frequent infection (3). Our report involves a 33-year-old man who has a complete duplex and late-presenting ureterocele with non-functioning of the upper moiety. This case emphasizes the need to identify ureterocele as a potential cause of chronic flank pain in adults and the endoscopic management of this problem.

CASE PRESENTATION

The patient was a 33-year-old man with no reported comorbid conditions. His medical history included one year of a dull pain in the left flank that comes and goes. He also denied the presence of lower urinary tract symptoms, hematuria, or fever. PVs and physical examination were not remarkable. Lab studies, such as complete blood count test, renal and liver function tests, and urine culture were normal (6).

A CT urography showed left complete duplex collecting system with significant hydronephrosis and thinning of the upper moiety and the lower moiety was still normal and emptied into the bladder (3). There was a cystic left vesicoureteric junction dilatation, which is typical of a left intravesical ureterocele (2).

The 99mTc-MAG3 renogram showed no perfusion and drainage in the left upper moiety, which is indicative of non-functionality, with normal excretion in the lower moiety and in the right kidney (5).

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Cystoscopy and deroofing of the left ureterocele was performed under the laryngeal mask anesthesia. Intra-operative results revealed a big thick-walled intravesical ureterocele with an enlarged left ureteric orifice. A 26 Fr resectoscope was used to incise and deroof the wall of the ureterocele using a Collin knife (4). Hemostasis was ensured and a Foley catheter was inserted. After the surgery, the patient continued to be afebrile with clear urine production and discharged after a day with the intention of follow-up renogram in three months.

Coronal CT urography showing a markedly dilated upper-moiety pelvis of the left duplex system with thinning of the renal cortex.

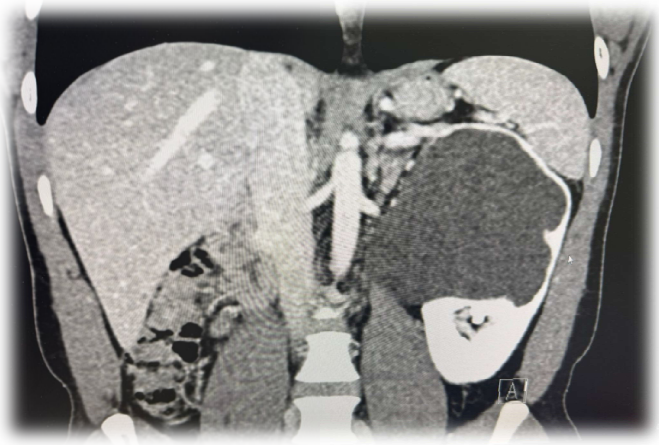

Figure 1. CT Urography (Coronal View)

DISCUSSION

Ureterocele is a dilatation cystic of the distal ureter as it drains into the bladder (1). In spite of the fact that most of the cases can be identified during childhood because of urinary tract infection or because of the antenatal hydronephrosis, rarely can they be identified

in adults, which constitute less than 10 per cent of the total cases (2). Adult ureteroceles are usually identified accidentally or when examining flank pain, recurrent infection, or hematuria (3).

Axial CT image demonstrating cystic dilatation of the distal left ureter within the bladder wall, consistent with a ureterocele.

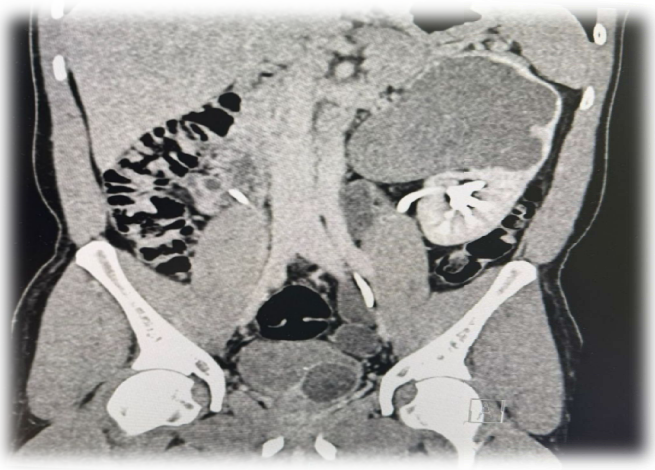

Figure 2. CT Urography

MAG3 renogram perfusion phase showing minimal uptake in the left upper moiety with preserved function on the right.

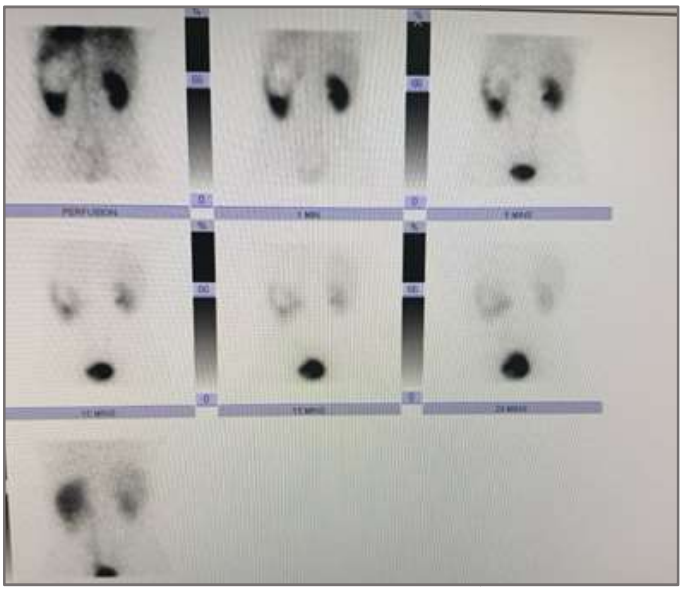

Figure 3. MAG3 Renogram (Perfusion Phase)

Ureteroceles are classified to be intravesical or ectopic, and to be single or duplex in relation to the collecting system (4). Duplex-system ureteroceles tend to occur more frequently in female and commonly linked to upper-moiety obstruction and non-functional renal tissue as observed in this case (6).

Imaging plays a pivotal role in diagnosis. The first of these modalities is employed to delineate the anatomy, which includes ultrasonography and CT urography, and the second one offers functional evaluation, which is the 99mTc-MAG3 renography (5). The CT use in this patient revealed a full duplex system with a significantly non-functional and commonly dilated upper moiety and the renogram showed poor perfusion and excretion.

Renogram curves confirming absent drainage of the left upper moiety and normal excretion of the right kidney.

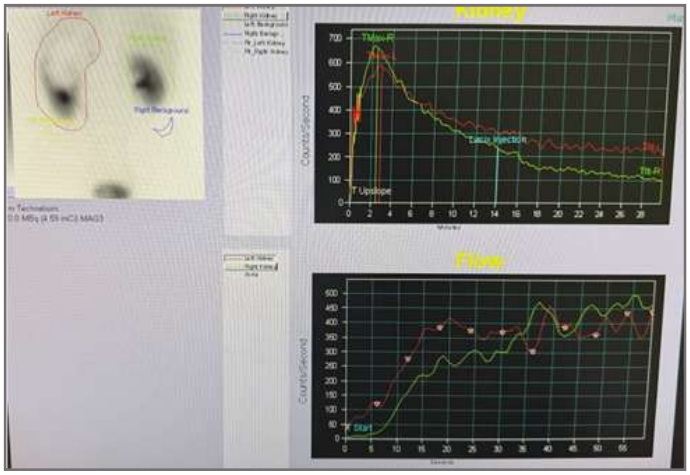

Figure 4. MAG3 Renogram (Time–Activity Curve)

Intraoperative cystoscopy image showing a thick-walled intravesical ureterocele prior to incision.

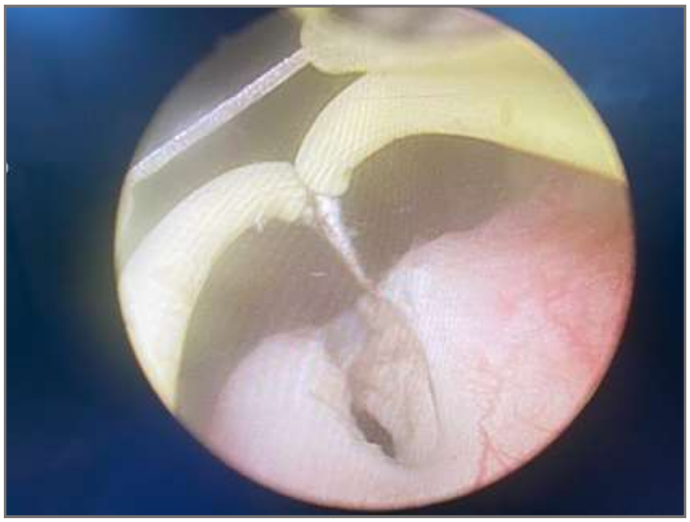

Figure 5. Intraoperative Cystoscopy (Pre-Deroofing)

Primary treatment of intravesical ureteroceles in adults is, still, endoscopic deroofing (3,4). It is a minimally invasive treatment that efficiently debrides the blocked system, maintains renal activity, and helps to avoid frequent infection. Deroofing in this instance has obtained an immediate decompression with the full disappearance of symptoms and the absence of post-surgery complications (6). Recurrent or ectopic ureteroceles or those related to vesicoureteral reflux needs ureteral reimplantation, and these are open or laparoscopic (2,5).

Key Message

The ureterocele in adults rarely presents itself and can be similar to other causes of chronic flank pain. Diagnosis requires a high index of suspicion with extensive imaging. Endoscopic deroofing is a safe and effective treatment method and has a good post operative outcome (3,4,6).

Deroofing of the ureterocele using a Collin knife via resectoscope with release of the obstructed orifice.

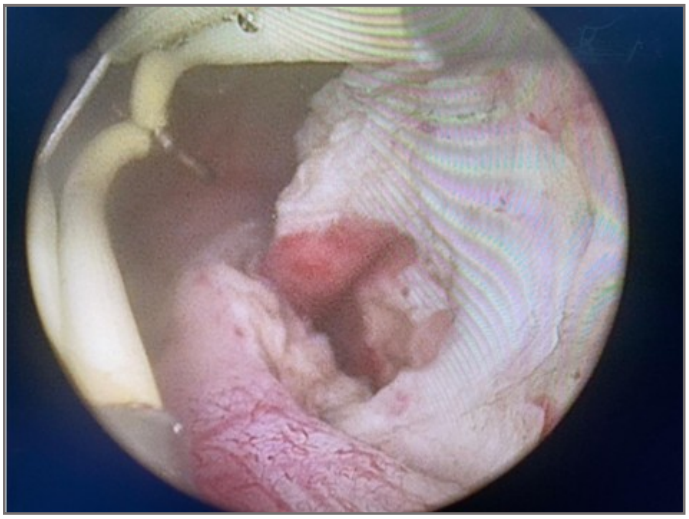

Figure 6. Intraoperative Cystoscopy (During Deroofing)

CONCLUSION

As this case shows, ureterocele, which is usually a pediatric diagnosis, may manifest itself in adulthood with general symptoms, including intermittent flank pain. Imaging, such as CT urography, and functional renography, are essential to determine the correct diagnosis and renal function (1,5). Endoscopic deroofing is a safe, least invasive and efficient method of managing intravesical ureterocele, which relieves obstruction without compromising renal function of the remaining moiety (3,4). The early diagnosis and immediate surgical treatment are the main aspects that can help avoid the further renal damage (6).

Conflict on Interest: None

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