

Giant Megaureter of a Complete Duplex System Presenting as Peri Umbilical Mass in an Elderly Male: A Case Report

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INTRODUCTION

Duplication of the collecting system is one of the most common congenital anomalies and is seen in 1 out of 125 (0.8%) people.⁽¹⁾ The ureteric orifice of the upper moiety causes clenching of the distal part of ureter in the area of muscle structures leading to obstruction to its flow and consequent proximal hydroureteronephrosis with atrophy of this segment.⁽¹⁾ In such patients one of the moieties is usually poorly functioning or non-functioning. This poorly functioning moiety is usually hydronephrotic and recurrent urinary tract infections or incontinence with an ectopic ureter might occur.⁽²⁾

The aim of our report is to have this rare entity in mind while evaluating such a mass in an elderly and laparoscopic upper partial nephroureterectomy as a minimally invasive option for its treatment.

CASE REPORT

A 61 years old male from rural background presented with complaints of gradually increasing swelling abdomen associated with heaviness and dragging sensation since last 5 to 6 months. He also gave history of recurrent episodes of turbid urine. On examination a cystic abdominal swelling with slight transverse mobility was noted occupying periumbilical region extending into all quadrants, predominantly on left side. An ultrasound abdomen was done elsewhere which revealed cystic abdominal swelling arising from small bowel (Figure 1). Contrast computed tomography (CT) scan abdomen showed cystic swelling abdomen suggestive of giant

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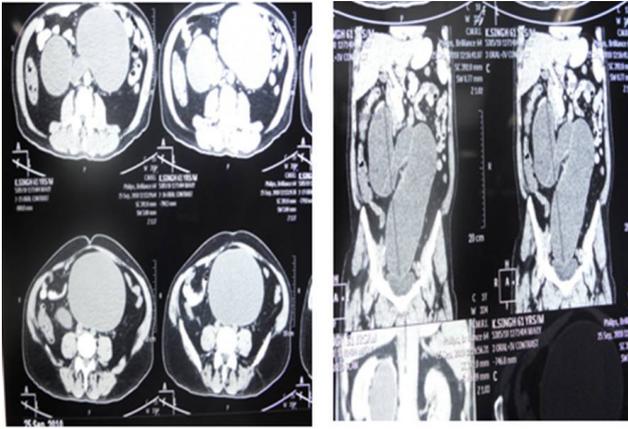


Figure 1. Coronal and axial cuts on CT scan showing grossly dilated and tortuous upper moiety ureter, crossing to the left side. Also, a huge hypo dense mass occupying whole of the abdomen, is seen on axial cuts.

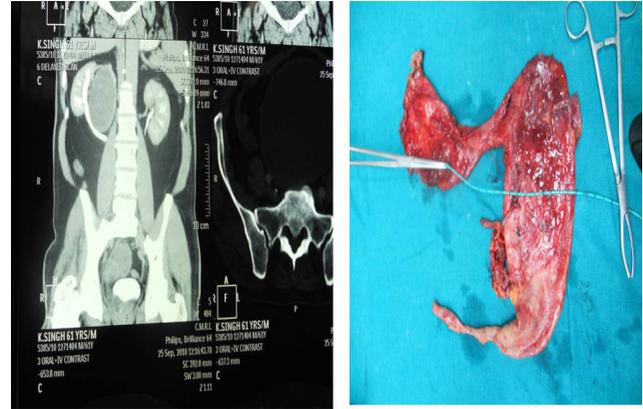


Figure 2. Left: CT scan with intravenous contrast showing lower moiety ureter deviated laterally by the dilated ureter, in its upper part. Right: Excised specimen of the megaureter showing tapered distal end and 9 centimeter diameter after deflation.

mega ureter with a duplex system displacing the lower moiety ureter medially (Figure 2). No contrast was taken up by the upper moiety. No cause for megaureter could be found after evaluation. Cystoscopy revealed a dimple inferior to the lower pole ureteric orifice which could not be calibrated by guide wire. Retrograde pyelogram from the inferior moiety opening showed the ureter pushed medially by the megaureter. The voiding cystourethrogram was normal. On laparoscopy a huge retroperitoneal mass was noted arising from right kidney and crossing the midline, with tapered distal end. Laparoscopic upper partial nephroureterectomy was performed with uneventful intra and postoperative course, using standard port sites and dividing the ureter on bladder surface. Distal end was clipped. Tube drain was removed after 3 days and the patient discharged on 4th day. Microscopy was suggestive of chronic ureteritis. He is following our department since last 6 months with good recovery.

DISCUSSION

Primary obstructive megaureter is uncommon in adults and is characterized by a congenital obstruction at the lower end of ureter, leading to gross dilatation of the ureter. Undiagnosed me-gaureter may progress to occupy the whole abdomen, and impose diagnostic difficulties. Bilateral involvement is present in 20% of the cases with a male-to-female ratio of

4:1.⁽³⁾

Duplex kidney and ureter is a developmental condition of incomplete fusion of the upper and lower poles of the kidneys. Additionally, an accessory ureteral bud creates complete duplication of the excretory system, with the upper ureter usually protruding into the bladder more medially and inferiorly than the lower ureter (Weigert-Meyer law). Many duplex kidneys are incidental findings and are not the cause of symptoms, although duplex kidneys are more prone to urinary infection, reflux, and obstruction. The upper ureter is more likely to be associated with ectopic insertion, ureterocele, or obstruction, whereas the lower ureter is frequently associated with vesicoureteral reflux.⁽⁴⁾ There have been reports of partial nephroureterectomy by either transperitoneal or retroperitoneal approaches, particularly in the pediatric population. An upper pole hemi nephroureterectomy is the standard treatment for a severely compromised upper renal moiety associated with duplicated collecting system due to the potential morbidity of leaving a non functioning renal moiety in place.⁽²⁾

Dorairajan and colleagues, reported a series of 37 cases of adult primary obstructive megaureter and concluded that its problems and complications are different from that of childhood and necessitates an aggressive therapeutic approach except in cases with severe renal failure.⁽³⁾ Botelho and col-

leagues reported a 25 year old girl with megaureter treated successfully by laparoscopic transperitoneal upper-pole nephroureterectomy.⁽⁶⁾ More recently Patel and colleagues, reported a similar case treated by robotic upper partial nephroureterectomy.⁽⁵⁾

CONCLUSION

This is one of the few reports of laparoscopic partial nephroureterectomy done in adults for such a giant megaureter, to our knowledge. This is a safe and effective technique, with good cosmetic and functional results in adults and should be preferred in selected cases.

CONFLICT OF INTEREST

None declared.

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