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CASE REPORT

Laparoscopic reimplantation of ectopic ureter in adult girl, first case report in Pakistan.

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ABSTRACT… Duplex collecting system is commonly associated with ectopic ureter in females. A 17 years old girl presented with continuous urinary dribbling since birth in our OPD and she also had urge to void. This is a rare case with double ureteral ectopia and this case report enlightens the suffering of rare diseased in terms of diagnosis and treatment. She had been frequently treated for urinary tract infections. The surgical treatment is the main stay which comprises the en bloc reimplantation of ectopic ureter via open surgical or laparoscopic approach. To our knowledge yet, laparoscopic reimplantation for ectopic ureter has not been reported in Pakistan. We did ureteral reimplantation of ectopic ureter laparoscopically.

Key words: Congenital Anomaly, Ectopic Ureter, Laparoscopic Reimplantation, Pediatric Urology.

INTRODUCTION

Ureter of either side right or left which may be single or duplex if open at place other than urinary bladder trigone is known as Ectopic ureter (EU). The reported incidence is one in 2000 live births while one in 4000 autopsies. Women with ectopic ureter have 80% chance of duplex system and remaining 20% have single system.[1,2] Incidence of duplex system is 17 to 33% with predominance in females.[3,4] Ectopic ureter in females opens in bladder neck and proximal urethra (33%), vaginal vestibule (33%), vagina (33%) and less than 5% in cervix. While in males, posterior urethra (47%) is the most common site of ectopic opening.[5,6]

Ectopic ureter can present prenatally with congenital obstructive uropathy and urinary tract infection. Urinary incontinence is the most common presenting complaint in childhood and may present with recurrent urinary tract obstruction.[5,7]

Case Report

A 17 years old girl presented to us in outdoor patient department (OPD) of our hospital with the complaint of urinary incontinence since birth. The patient had continuous urine dribbling requiring 4–5 daily pads but also had urge to void. She visited multiple clinics from last 5 years and been treated there for urinary tract infection. She had no comorbidity. Systemic history was not significant. Past medical and surgical history taken but it was also not significant. She belonged to a poor family. Her father was laborer by profession and mother was house wife. She had 5 siblings, 2 brothers and 3 sisters. All were healthy.

Her vitals blood pressure (B.P), respiratory rate, heart rate (HR), and temperature were normal. Physical examination was done with more focus on the external genitalia. It appeared ectopic ureteric orifice seen just below the external sphincter with mild vaginal pooling of urine.

Initially, ultrasound KUB was done which showed left sided mild hydronephrosis and hydroureter. Urinary tract infection ruled out on dipstick urinalysis and urine culture & sensitivity. CT Urography was done that showed bilateral excretion of contrast from both kidneys with

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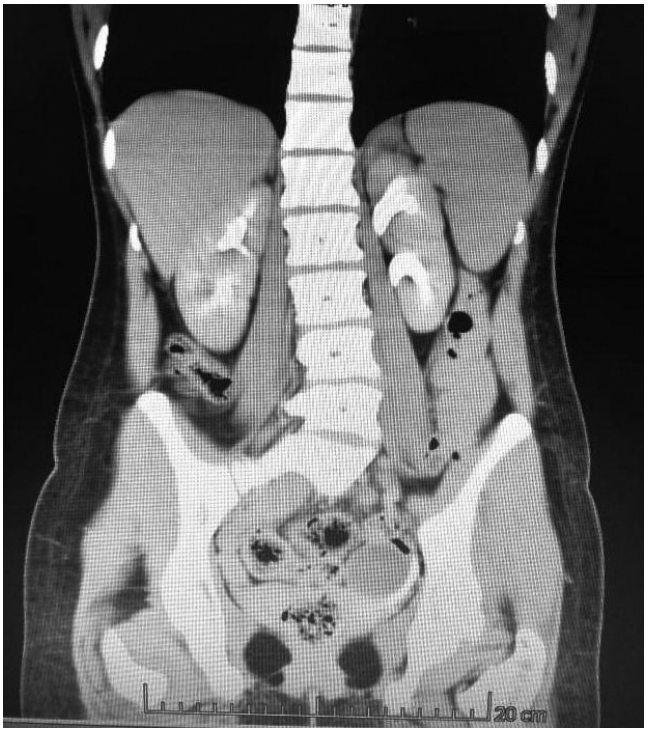
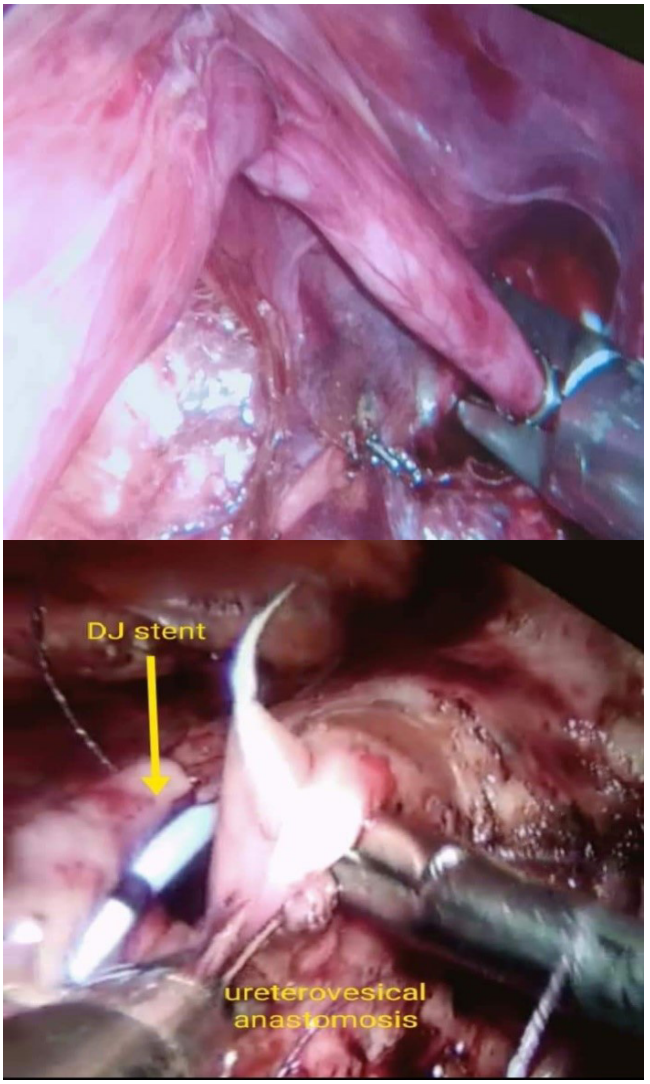
partial bilateral duplex system.

On cystoscopy bladder was normal right ureteric orifice was normal but left ureteric orifice was not visualized. RGP (retrograde pyelography) showed that both ureter joining at proximal part, distally as single ureter, partial duplex system.



Diagnosis made and we planned a left sided laparoscopic ureteric reimplantation. It was done in trendelenburg position with 4 port insertion under general anesthesia. 14 Fr foley's catheter passed after anesthesia to decompress the bladder. Pneumoperitoneum created with veress needle. First port (10mm) was inserted at veress needle site, above the umbilicus for the camera. Second and third port of 5 mm placed at the right and left lateral rectus muscle at the same level as first. And the fourth port of 5mm placed 6 cm below the umbilicus in the suprapubic area in midline.

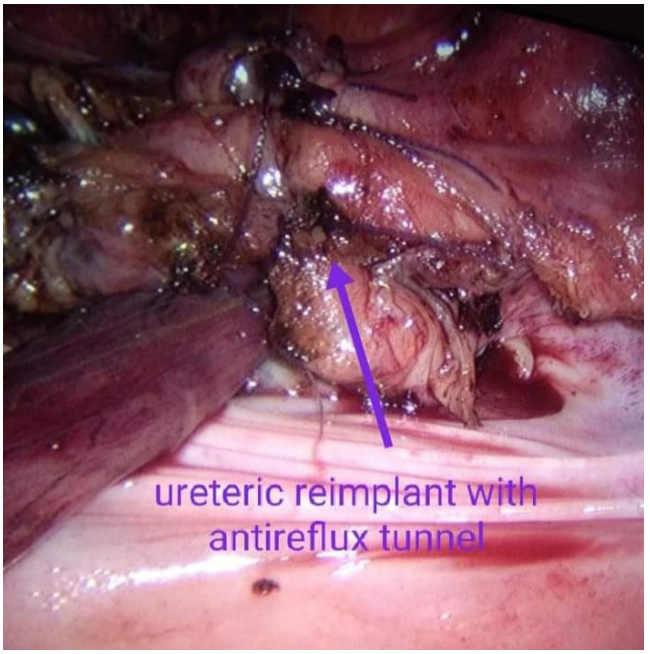
After port placement, left ureter was identified at level of iliac vessel bifurcation and traced as distally as possible, ureter mobilization done with intact blood supply to gain maximum length for reimplantation. Ureter clipped and cut then bladder filled with saline.



After spatulation of ureter, double J (DJ) stent was placed over guide wire. Bladder was identified to perform ureterovesical anastomosis. Lich-Gregoir technique adopted for anastomosis. The bladder tunnel was created on the dome of bladder using a scissor cautery. Ureter attached on this tunnel with vicryl 4/0 stitch for mucosa and the second muscle layer closed with the vicryl 2/0.

Operative time was 180 minutes from start till dressing. Patient shifted to recovery then to the ward. X-ray KUB done that showed normal positioning of DJ.

On 1st post op day, drain output was 200 ml in 24 hours. Next day it started decline and it was nil at 3rd post op day.



Drain removed on 4th day and patient discharged with foley's catheter insitu. After 3 weeks we did Cystogram with lateral films, there was no leakage found with reflux in left kidney and foley removed. She came after 4 weeks as routine follow up. Patient was symptom free. DJ was removed after 2 months under local anesthesia and patient discharged on same day.

DISCUSSION

Our case report presents a rare genitourinary system congenital anomaly management with the advanced technique. Patient's presentations depend on the site of insertion of ectopic ureter and also differ from male to female.[9] Commonly males present with recurrent urinary tract infections (UTIs) or antenatal hydronephrosis because of ectopic ureter insertion in posterior urethra (47%) proximal to external sphincter. Contrary to male presentation, female presents with urinary dribbling. Our case also presented with urinary dribbling since birth because of ectopic ureter insertion distal to external sphincter.[6,12] Female with a ureteral insertion at or above the bladder neck and upper urethra will be continent.[1,9,10] Females have duplex system with ectopic ureter more commonly than males.[11]

In our case patient has been treated in the line of UTI for more than 5 years since birth, although she had continuous urine leakage along with normal voiding pattern which is almost same to other studies. In our case we diagnosed ectopic ureter on retrograde pyelography (RUG) where as in literature most of the cases have been diagnosed preoperatively with IVU or CT Urography which was also done for our patient but as ectopic ureter was infrasphincteric so missed on CT Urography (CTU) while in literature ectopic ureter was opened into the vagina.[6,13,12]

Our operative time was 180 minutes which is almost equal or with slight differences from others. We did not bowel prepared before surgery and patient was orally allowed after 6 hours. It was tolerated well.[6,13]

Laparoscopic reimplant have many advantages over open surgery. It has less morbidity because of early mobility and return to work, less hospital stay, less pain, minimal incision and excellent cosmetic results.

The exceptionality of this case, ureteric reimplant done laparoscpically in remote area where resources are limited. This is the first report of laparoscopic ureteric reimplant done in Pakistan. We recommend, always consider ectopic ureter in provisional diagnosis of urinary dribbling in children, especially girls.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
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2	Kumail Sajjad	Write-up, Review.	
3	Qazi Naeem	Write-up.	