ECTOPIC URETER WITH IPSILATERAL RENAL AGENESIS PRESENTING WITH RECURRENT EPIDIDYMO-ORCHITIS

Shanky Singh, Anubhuti Sharma, *Priyabrata Das and Vaibhav Vikas

Department of Urology, Government Medical College, Trivandrum, India

ABSTRACT

Background: Ectopic ureter with ipsilateral renal agenesis is a rare congenital urinary tract abnormality and presenting with recurrent epididymo-orchitis is still more rare. Patient management can be challenging in such a case. The diagnosis can generally be made with computed tomography imaging and retrograde pyelogram can also be useful in indeterminate cases. We report our experience of seven cases of ectopic ureter with renal agenesis and its management.

Material and Methods: In between January 2013 and April 2017, seven patients were identified with ectopic ureter with renal agenesis. All presented with recurrent epididymo-orchitis. There were demographic, diagnostic, and procedural data were recorded. Investigations included renal ultrasonography (USG), micturating cystography (MCU), cystoscopy, computed tomography (CT) and retrograde uretero-pyelography (RGP). All patients underwent ectopic ureter excision. Treatment outcome was assessed in terms of quality of life, recurrence and complications.

Results: At a mean follow-up of 24.28 months all were symptomatic free. Their median age was 35.71 yrs (range 23-50 yrs). All patients had flank pain with scrotal pain and intractable dysuria. Computed tomography and cystoscopy revealed a blind ending ureter with distal cystic dilatation which was opening just proximally to verumontanum. Ectopic ureter excision was performed in all patients. Vasectomy was required in two patients as they were still symptomatic after ectopic ureter excision. No complications were detected during follow-up and all had a good quality of life. Patient symptoms gradually improved and no complications were detected during follow-up.

Conclusion: Ectopic ureter excision with or without vasectomy is a good surgical option in the management of recurrent epididymo-orchitis.

INTRODUCTION

Ectopic ureter can be associated with duplex kidney or renal agenesis. Duplex kidney is the most common congenital abnormality of the urinary tract, with an incidence of around 2% (Singh et al., 2017) and in combination with ectopic ureter presents with various reproductive system malformations. Dysplastic features are mainly present in the draining collecting system. The ectopic ureter can open into prostatic urethra, ejaculatory duct, seminal vesicles or vas deferens in men and in the vulva or the urethra in females (Ivan Dobrock et al., 1995). Ipsilateral hypoplastic kidney is less commonly associated with an ectopic ureter. Ectopic ureter with ipsilateral renal agenesis is a rare congenital urinary tract abnormality and presenting with recurrent epididymo-orchitis is still more rare. Patient management can be challenging in such a case. We report our experience in management of a case of ectopic ureter with ipsilateral renal agenesis presenting with recurrent epididymo-orchitis.

*Corresponding author: Priyabrata Das,
Department of Urology, Government Medical College, Trivandrum, India.

MATERIAL AND METHODS

Between January 2013 and April 2017, seven patients with a mean age of 35.71 years (range 23 to 50) underwent treatment for ectopic ureter with renal agenesis at our institution. Patients demographical, diagnostic and procedural data were recorded. Initial evaluation was done with ultrasonography, voiding cystourethrography (VCUG), cystoscopy and computed tomography Retrograde uretero-pyelography was done in selected complex cases. Full written informed consent was obtained from each patient after explanation of all the available techniques and risk of procedure. Ectopic ureter removal was done in all cases and if symptoms persisted then vasectomy was done. Post-operatively the drain was removed once the drainage was less than 5 cc/24 h. The catheter was removed the next day. Oral fluids and feeds were started on the appearance of peristaltic sounds. Patients were followed up for urinary infection and any recurrence. A successful outcome was defined as the subjective and objective improvement in symptoms. All variables were categorical and percentage and proportions were calculated manually.
RESULTS

All male patients presented with recurrent left flank and scrotal pain since 1 year with history of dysuria. Ipsilateral kidney was not visualized in renal fossa in ultrasonography abdomen in five patients in left side (71.4%) and two patients (28.57%) in right side. Computed tomography urography showed kidney absence with two dilated tubular structure in midline and lateral aspect of prostate with bilateral seminal vesicle normal. Transrectal ultrasonography showed tubular serpiginous cystic structure replacing paramedian region of prostate with internal echoes and compressing ejaculatory duct. Cystoscopy showed a cystic lesion with small opening just proximally to verumontanum. RGP showed blind ending ureter with distal cystic dilatation. Voiding cystourethrography was normal. Patients underwent first paraverumontanum cyst incision. Epididymo-orchitis still persisted so left ectopic ureter removal was done in all patients. In five patients (71.4%) ectopic ureter was removed by laparoscopy approach and in two patients (28.57%) open surgical approach was used. Two patients (28.57%) underwent vasectomy as their symptoms still persisted. Patient symptoms gradually improved and no complications were detected during follow-up.

Table 1. Demographical and surgical data

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age (yrs)</th>
<th>Side</th>
<th>SURGERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32</td>
<td>L</td>
<td>OPEN</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
<td>L</td>
<td>LAPAROSCOPY</td>
</tr>
<tr>
<td>3</td>
<td>25</td>
<td>R</td>
<td>LAPAROSCOPY</td>
</tr>
<tr>
<td>4</td>
<td>45</td>
<td>L</td>
<td>LAPAROSCOPY + VASECTOMY</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>R</td>
<td>LAPAROSCOPY</td>
</tr>
<tr>
<td>6</td>
<td>23</td>
<td>L</td>
<td>LAPAROSCOPY</td>
</tr>
<tr>
<td>7</td>
<td>49</td>
<td>L</td>
<td>OPEN + VASECTOMY</td>
</tr>
</tbody>
</table>

L-left; R-right

DISCUSSION

Incidence of ectopic ureter is about 1:2000 and is more common among female than male. Approximately, 80% of ectopic ureters drain the upper pole of duplicated collecting system, especially in females. In males, most ectopic ureters are associated with a single collecting system. The most common location of ureteral ectopia include: urethra, urethrovaginal septum, and vestibule of vagina in females and posterior urethra, seminal vesicle, prostatic utricle, and ejaculatory duct in males (Mori, 2001). The degree of ectopia has its influence on kidneys – the more ectopic ureteral orifice exists, the kidney is more severely changed (hypoplastic or dysplastic). In patients with duplicated collecting system and ectopic ureter, dysplasia of the upper pole of the kidney can be found. In male patients with single-system ectopic ureter, the kidney is often small (dysplastic) or even difficult to visualize on imaging studies (Wakhlu et al., 1998). Therefore, there is suspicion of renal agenesis in such cases (Terai et al., 1995). An ectopic ureter is usually dilated and obstructed. Clinical symptoms differ between genders.

The most common symptoms in male patients are urinary tract infection, acute and recurrent epididymitis, abdominal and back pain, and infertility in adulthood (Chu et al., 2012). Initial ultrasound examination and voiding cystourethrography and later on computed tomography, magnetic resonance imaging and cystoscopy can be helpful to establish the diagnosis. In our patients with recurrent epididymo-orchitis, renal agenesis with dilatation of ureter was found using ultrasonography. Computed tomography and cystoscopy with RGP confirmed diagnosis of ureteral ectopia. Patient symptoms persisted after paraverumontanum cyst incision so ectopic ureter removal was done.

Conclusion

Ectopic ureter with ipsilateral renal agenesis can present with recurrent epididymo-orchitis and no specific symptoms. Ectopic ureter removal either open or by laparoscopy can be a feasible treatment for such cases. Vasectomy may be required in intractable cases.

REFERENCES


