



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

*International Journal of Recent Scientific Research*  
Vol. 6, Issue, 4, pp.3764-3765, April, 2015

**International Journal  
of Recent Scientific  
Research**

## RESEARCH ARTICLE

### BILATERAL SINGLE SYSTEM ECTOPIC URETERS: A RARE ENTITY

**Bhupender Kadyan, Vilas Sabale, Vikram Satav, Sahaj Garg, Abhirudra Mulay, Deepak Mane, Sharadkumar Kankalia and Rohit Singh**

Department of Urology, Dr.D.Y.Patil Medical College, Pune-411018

#### ARTICLE INFO

##### Article History:

Received 14<sup>th</sup>, March, 2015  
Received in revised form 23<sup>th</sup>,  
March, 2015  
Accepted 13<sup>th</sup>, April, 2015  
Published online 28<sup>th</sup>,  
April, 2015

##### Key words:

#### ABSTRACT

A ureter that opens at a site distal to the posterolateral aspect of the trigone is known as ectopic ureter. Commonly; with complete duplication, upper moiety ureter can be ectopic. A 4 year girl presented with continuous dribbling of urine since birth. Clinically-No abnormality. IVU revealed bilateral gross hydrouretero-nehrosis with ectopic ureters. Bilateral ureteric reimplant was done. Review of literature suggests it to be a rare entity.

**Copyright** © Bhupender Kadyan *et al.*, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

#### INTRODUCTION

An ectopic ureter is defined as an ureteric orifice outside the posterolateral extremity of the bladder trigone.<sup>1</sup>Ectopic orifices, 80% are associated with a duplicated collecting system. Ectopic ureters draining single systems are rare<sup>2,3</sup>, occurring only in 20% cases.<sup>4</sup> Bilateral single system ectopic ureters are very rare. The embryologic mechanism is that the ureteric bud arises more cranial than usual from the mesonephric duct,<sup>5</sup> so that it is taken into the bladder wall at a lower level during the seventh week of gestation or does not join the bladder wall at all. An ectopic ureter that inserts either into the urethra distal to the sphincter or into the vagina in a girl typically presents with continuous wetting despite an otherwise normal micturition pattern. In children with small capacity bladder, the bladder may or may not regain its normal size and function. We are presenting a case of bilateral single system ectopic ureter in which the patient became continent with bilateral ureteric reimplantation.

#### Case Report

A 4-year-old girl presented with continuous dribbling of urine along with normal voiding pattern since birth. There was no urgency, frequency, dysuria or flank pain. There was history suggesting incontinence over continence. Physical examination was unremarkable except for leakage of urine through introitus. Urinalysis showed 10-15 pus cells/hpf, and urine culture revealed no growth. Blood biochemical parameters were within normal limits including renal function tests. Intravenous

urogram (figure-1) revealed gross bilateral hydronephrosis with hydroureter and 3-D MR (figure-2) suggestive of opening of right ureteric orifice at bladder neck and left orifice at introitus. Voiding cystogram revealed bladder capacity of 150 ml. Cystoscopy revealed good bladder capacity with right ureteric orifice at the bladder neck and left orifice at the introitus. Bilateral reimplantation of ureters using combined extravascular / intravesical technique was performed (figure-3).



**Figure 1** Intravenous Urogram

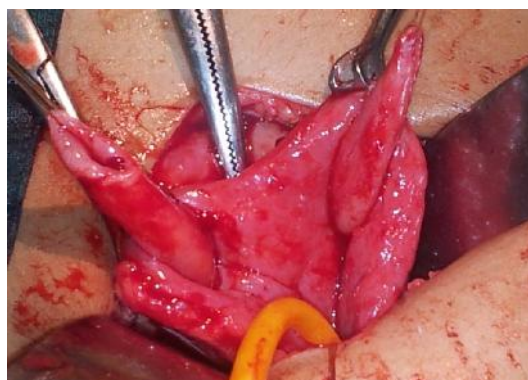
\*Corresponding author: **Bhupender Kadyan**

Department of Urology, Dr.D.Y.Patil Medical College, Pune-411018

Postoperatively, drain was removed on day 4, infant feeding tube was removed on day 15 and suprapubic cystostomy catheter was removed on day 21. Postoperative recovery was uneventful. In the immediate postoperative period, the patient was totally continent but had to void frequently, which improved later.



**Figure 2** M.R Urography



**Figure 3** Intra-Operative

## DISCUSSION

Ectopic ureters appear more commonly in females.<sup>6</sup> Other abnormalities include imperforate anus and trachea-esophageal fistula, duplicated vagina, hemivagina, and bicornuate uterus. Ectopic orifices, 80% are associated with a duplicated collecting system. Bilateral single-system ectopic ureters are fortunately rare.

In females, urethra and vestibule are the most common sites, accounting for 70% of ectopic ureter cases, respectively.<sup>7</sup>

### How to cite this article:

Bhupender Kadyan et al., Bilateral Single System Ectopic Ureters: A Rare Entity. *International Journal of Recent Scientific Research* Vol. 6, Issue, 4, pp.3764-3765, April, 2015

We performed bilateral ureteral re-implantation using extravesical and intravesical technique and the patient was fully continent during follow-up.

In some studies, it has been reported that only ureteral reimplantation may not solve the problem of incontinence due to insufficient development of the trigone and bladder neck. Augmentation cystoplasty then becomes necessary to enlarge the bladder capacity<sup>8</sup>.

Treatment options for duplicated system include either ureteropyelostomy or common sheath ureteral reimplantation, or reimplantation for a single system.

## CONCLUSION

Attainment of continence & preserving renal function is the main goal of treatment in ectopic ureters. With good bladder capacity, bilateral ureteric reimplantation would suffice thereby avoiding the need of augmentation cystoplasty.

## References

1. Ahmed SA, Barker A. Single system ectopic ureters: A review of 12 cases. *J Pediatr Surg* 1992; 27:491-6.
2. Blane CE, Ritchey ML, DiPietro MA, Sumida R, Bloom DA. Single system ectopic ureters and ureteroceles associated with dysplastic kidneys. *Pediatr Radiol* 1992; 22:217-20.
3. Gangopadhyaya AN, Upadhyaya VD, Pandey A, Gupta DK, Gopal SC, Sharma SP, Kumar V. Single system ectopic ureter in females: A single center study. *J Indian Assoc Pediatr Surg* 2007;12:202-5.
4. Greene LF. Ureteral ectopy in females. *Clin Obstet Gynaecol* 1967; 10:147-50.
5. Heuser M, Zoller G, Seseke F, Zappel H. Bladder dysfunction in children with single ectopic ureters. *J Pediatr Surg* 2002; 37:15.
6. McSynder H. Anomalies of the ureter. In :Gillenwater JY, Howards SS, Duckett JW, editors. *Adult and pediatric urology*. St. Louis: Mosby Year Book; 1991. p. 1831-62.
7. Parrott TS, Gray SW, Skandalakis JE. Bladder and urethra. In :Skandalakis JE, Gray SW, editors. *Embryology for surgeons*. 2<sup>nd</sup> ed. Baltimore: Williams and Wilkins; 1994. p. 695-700.
8. Richard N, Schluskel, Retik AB. Ectopic Ureter, Ureterocele and other anomalies of the Ureter. In: Wein AJ, Kavoussi LR, Novick AC, Partin AW, Peters CA, editors. *Campbell-Walsh Urology*. 9th ed. Philadelphia: WB Saunders; 2007. pp. 3387

\*\*\*\*\*