Urology Case Reports 41 (2022) 101980

Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: www.elsevier.com/locate/eucr

Duplicate urethra communicating with seminal vesicles: A rare case report

Tao Zhou, Weikang Chen, Zhigang Wu *

Department of Andrology, The First Affiliated Hospital of Wenzhou Medical University, Wenzhou, China

ARTICLE INFO

Keywords:
Urethral duplication
Ejaculatory ducts
Congenital anomaly
Epispadias

ABSTRACT

Urethral duplication is a rare congenital anomaly. A rare variety of accessory urethra communicating with the right seminal vesicle is reported, this is a case report of a 46-year-old male who manifested as semen discharge from the ectopic opening of the urethra, and abnormal discharge of secretions in the near future. After conservative treatment with antibiotics, the symptoms disappeared. The classification, diagnosis, and treatment for this anomaly are discussed.

1. Introduce

Urethral duplication (UD) is a rare congenital anomaly and The reason of its etiology remains to be explored. There are various types of classification, currently, the most commonly used classification system is the one proposed by Effmann. Our case is a urethral duplication connected to the ectopic ejaculatory duct, which does not conform to the Effmann classification system.

2. Case report

The patient was a 47-year-old male who has a son from Lishui, Zhejiang Province. Semen has been discharged from the ectopic opening of urethra since puberty. And a small amount of abnormal secretion has appeared in recent 4 months. He denied urinary incontinence, double stream, or abnormal erections. Physical examination showed that there are two openings in the external urethra (Fig. 1). Urine routine shows: WBC (+++), RBC (+), urine culture prompt: Cultivation is free of bacteria, fungi, and chlamydia. Ectopic opening secretion culture prompt: Escherichia coli. No obvious abnormalities were found in blood routine. The urethral angiography confirmed whether the ectopic opening was the opening of the ejaculatory duct (Fig. 2). During the examination, the Cefdinir and levofloxacin tablets were taken orally for 2 weeks according to instructions and then re-examined, ectopic opening secretion culture prompt: Cultivation is free of bacteria, fungi, and chlamydia. The patient felt less discharge than before and continued to take it orally for 2 weeks. After the secretion disappeared, there was no visit and follow-up.

3. Discussion

Urethral duplication (UD) or double urethra is quite a rare anomaly with ill-defined etiology. Currently, the most commonly used classification system is the one proposed by Effmann. According to Effman classification, urethral duplications are divided into three main groups, as Type I, II, and III (Fig. 3),[1,2] ut Our case could not find a place. Our case is an ejaculatory duct anomaly and completely separate from the urethra which does not conform to any classification system. In our case, it has two "urethras", one is normal urethra and the other is abnormal. The proximal end of the urethra is connected with the ejaculatory duct and seminal vesicle; The distal opening is above the external orifice of the normal urethra.

Most patients with duplication anomalies of the urethra are asymptomatic, and there is still no consensus on the treatment of it. Patients seeking medical attention ususally accompany incontinence, double stream, chordee, or infection. Treatment options for UD include follow-up without a specific therapy, urethral dilatation, perineal urethrostomy, urethrourethrostomy, and surgical operations such as urethroplasty surgery using buccal mucosal or tubularized grafts.[3] Our patients have been relieved and cured by anti-infection treatment.

The diagnosis can be made by the patient's main complaint, symptoms, signs and auxiliary examination. The main diagnostic imaging procedures include voiding cystourethrography, intravenous pyelography, ultrasonography (USG), retrograde urethrography, and MRI.

Anatomical course, shape, diameter and relationship with urinary bladder of both urethras can be readily assessed with urethrography. UD is a complex anomaly and different manifestations probably have different embryological origins. MRI and CT scan help in diagnosing the

* Corresponding author.
E-mail address: andrologywzg@wmu.edu.cn (Z. Wu).

https://doi.org/10.1016/j.eucr.2021.101980
Received 16 November 2021; Received in revised form 8 December 2021; Accepted 12 December 2021
Available online 14 December 2021

Fig. 1. The arrow towards right means ectopic ejaculation orifice; the arrow towards left means Urethral orifice.

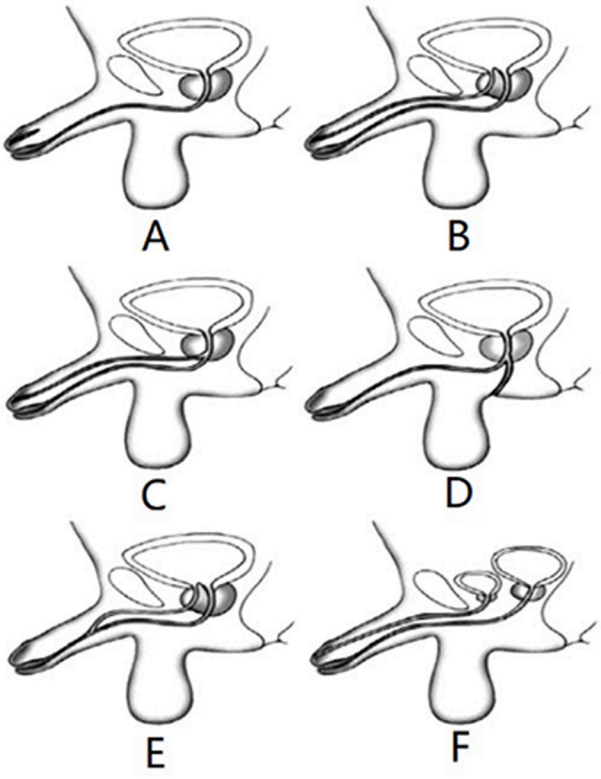

Fig. 3. Illustration of Effmann classification; Picture referenced from Cicek T. A: type 1 Blind-end accessory urethra. B: type 2 Completely patent accessory urethra. C: type 2-A1 Two non-communicating urethra arising independently from bladder. D:type 2-A2 A second channel arising independently into a second meatus (Y duplication) E:type 2B Two urethra arising from the bladder or posterior urethra and uniting to form a common channel distally. F: type 3 Accessory urethra arising from duplicated or septated bladders.

accompanying genitourinary and gastrointestinal abnormalities (including solitary kidney, Mullerian anomalies, duplicated colons and double anuses etc).[4] In clinical, Urethral duplication is often associated with congenital renal anomalies, therefore we make an abdominal computed tomography check and the result shows no obvious abnormality.

Persistent urinary tract symptoms may need surgical intervention. The preferable procedure is excision of the entire accessory tract.[5] In order to reduce postoperative fibrosis, reduce the chance of sphincter injury and avoid urethral stricture, open exploration should be reduced as much as possible , other suggested procedures include partial excision or fulguration of the accessory tract or uniting the normal and abnormal channels. However, the problem of these operations is the existence of postoperative urethral stricture and recurrent urinary tract infection.

4. Conclusion

There has been a urethral ectopic opening since childhood, the distal opening is on the glans and the proximal opening is connected with the right seminal vesicle. Urography suggests that it is a congenital accessory urethral channel connected with the ectopic ejaculatory duct. This is extremely rare and has not been reported among Asian people.

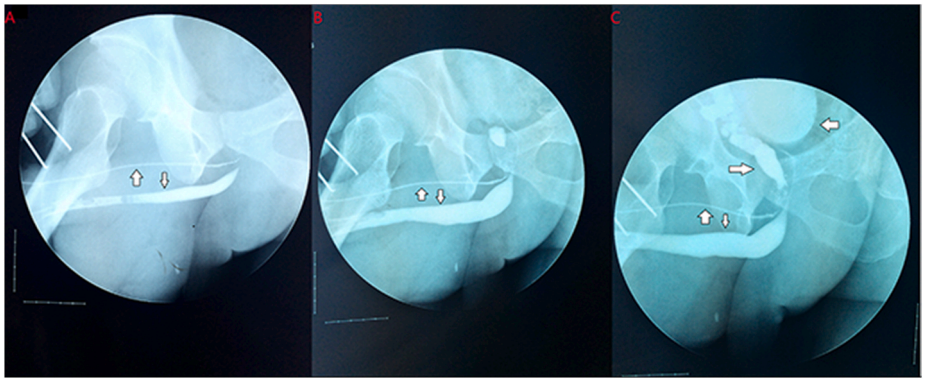

Fig. 2. The arrow towards upwards means ejaculatory duct; the arrow towards downwards means urethra; the arrow towards right means right seminal vesicle; the arrow towards left means bladder.

References

1. Effmann EL, Lebowitz RL, Colodny AH. Duplication of the urethra. *Radiology*. 1976; 119(1):179–185. https://doi.org/10.1148/119.1.179.
2. Cicek T, Kizilkan Y, Coban G, Kosan M. Urethral duplication: a rare cause of recurrent urinary infection. *J Pakistan Med Assoc*. 2015;65(1):90–92.
3. Mane SB, Obaidah A, Dhende NP, et al. Urethral duplication in children: our experience of eight cases. *J Pediatr Urol*. 2009;5:363–367.
4. Bhadury S, Parashari UC, Singh R, Kohli N. MRI in congenital duplication of urethra. *Indian J Radiol Imag*. 2009;19(3):232–234. https://doi.org/10.4103/0971-3026.54884.
5. Lima M, Destro F, Maffi M, Persichetti Proietti D, Ruggeri G. Practical and functional classification of the double urethra: a variable, complex and fascinating malformation observed in 20 patients. *J Pediatr Urol*. 2017;13(1):42.e1–42.e7. https://doi.org/10.1016/j.jpurol.2016.10.008.