



Pediatrics

Needle urethral self-insertion for nine years in an adolescent boy

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ABSTRACT

Self-insertion of needles into the urethra is rare among children, especially in adolescents with no evident history of mental illness. It is usually an urological emergency condition and needs surgery as soon as possible. The case we report here is a 14 year-old boy with urethral self-insertion of a sewing needle which was lodged in urethra for 9 years. The needle was successfully removed by urethrocystoscope with a surgical grasper. Our objective of this case report is to remind urologists and pediatrician of the possibility of urethral foreign bodies and recommend scrotal ultrasonography as the first examination modality.

Introduction

Urethral inflicted objects is an unusual problem in children, with several case reports in the literature to describe presentation and management. The most common motive associated with foreign bodies of the genitourinary tract is sexual stimulus or curiosity. Patients are often symptomatic at presentation and admit the recent urethral insertion initially. Under this situation, It is easily and promptly diagnosed. We describe a 14-year-old boy with a urethral needle of nine-year duration who had occasional penile tingling sensation, which was successfully removed using a surgical grasper.

Case report

A 14-year-old boy accompanied by his parents presented to our outpatient department with complaints of occasional tingling sensation of the penis without any significant lower urinary tract symptoms. Physical examination did not reveal any remarkable positive signs of the external genitalia. No solid mass or calculus was palpated in the bulbar urethra. The perineal skin was also normal and there was no bruise or infection sign. Laboratory examinations including urinalysis and routine blood test were all in normal range. Scrotal ultrasound was attempted to perform and showed a hyperechogenic strip without acoustic shadow measuring 0.6mm unexpectedly (Fig. 1A). Pelvic CT three-dimensional reconstruction revealed an approximate 46.9mm strip shadow with high density in anterior urethra (Fig. 1B). Then, plain X-ray of the pelvis was scheduled and confirmed a linear radio-opaque foreign body below

the symphysis pubis overlying penile soft tissue shadow, measuring approximately 5 cm, which was highly similar with a sewing needle shadow (Fig. 2). The patient denied any history of psychiatric disorders, domestic abuse, school bullying, genital trauma or urethral foreign body insertion.

The patient was placed in a lithotomy position under general anesthesia. Urethroscopy revealed a sharp rusted sewing needle at the anterior urethra, with the sharp end lodged in the mucosa of the proximal urethra (Fig. 3A). There was no signs of bleeding. The sewing needle measuring 5cm was removed successfully with a grasper (Fig. 3B), and the urethra was washed to clear the rust of the sewing needle. Patient was catheterized with a Foley's catheter to prevent further urethral stricture and prescribed oral antibiotics for 7 days.

On further questioning, the father told us that the boy had intermittent voiding discomfort, but he did not pay much attention. Finally, the patient was asked repeatedly and intimidated trickily. He admitted the insertion of some foreign bodies within the urethra when he was very young, maybe 5 years old. Subsequently, psychiatric consultation was recommended in the patient follow up. On 1-month follow-up, the patient was in good condition and previous symptoms disappeared.

Discussion

There are many reviews and case reports which reveals that various foreign bodies in the urethra have been described including pencils, magnetic ball, pen lids, wire, thermometer, toothbrushes to gloves, tampons, pessaries, cocaine powder, and fluids such as glue and hot

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Fig. 1. (A) A Scrotal ultrasound showed a hyperechoic strip without acoustic shadow. (B) Pelvic CT three-dimensional reconstruction revealed a 46.9 mm strip shadow with high density in anterior urethra.

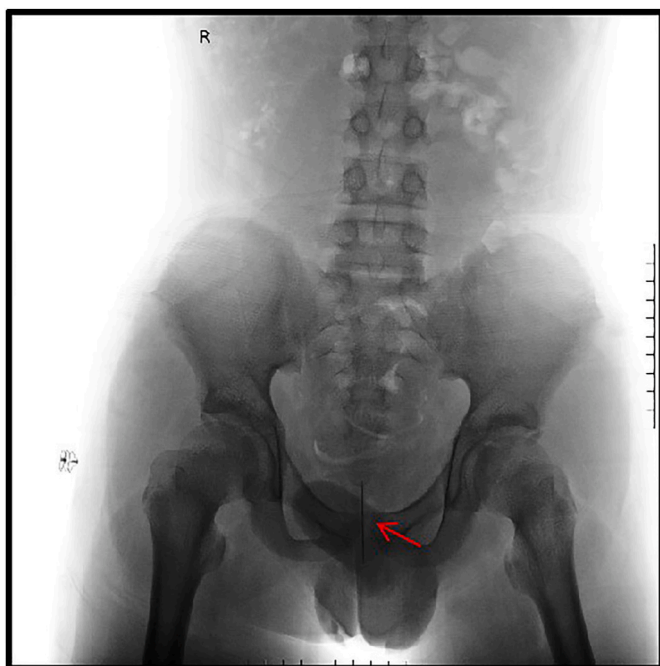


Fig. 2. Pelvic X-ray shows a 50mm radiopaque needle-like foreign body.

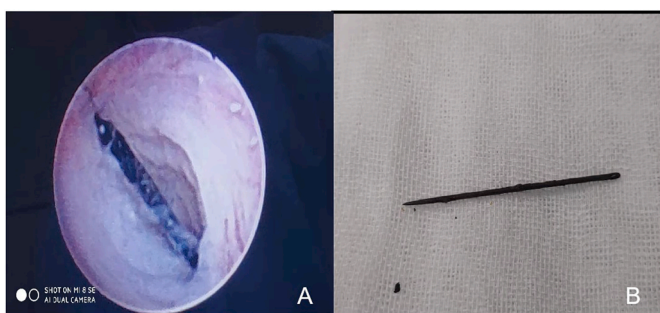


Fig. 3. (A) Endoscopic view of the metallic body seen in the urethra. (B) a sharp rusted sewing needle was removed, which was consistent with 9-year stay in urethra.

wa^x.¹ However, urogenital tract inflicted objects is an unusual problem in children. He Y et al.² studied characteristics for foreign body self-insertion in 188 cases of retained urogenital tract foreign bodies, and found the peak ages were between 3-5 years old and 9-13 years old, and the peak seasons were spring and summer. He also reported that girls younger than 6-years-old were more susceptible to vagina foreign

bodies, while boys older than 11-years-old were more vulnerable to bladder foreign bodies. The most common motive that lead to self-insertion of foreign bodies are erotic impulses, mental illness or borderline personality disorder, sexual curiosity. Self-insertion of needles are rarely reported as they lead to sharp pain and blood urine rather sexual excitation. Zaghib S et al.³ described a 14-year-old boy with urethral self-insertion of a sewing needle who complained of dysuria for 3 days. Park S et al.⁴ reported a boy with a urethral needle who had no remarkable symptoms. However, this patient in his case took the initiative to inform the urethral insertion history, and the foreign body was quickly diagnosed and removed. In the current case report, the patient had mild voiding symptom with slight penile pain and he strongly denied urethral foreign body insertion at presentation, which made it difficult to promptly and accurately diagnose. Embarrassment and vague memory of urethral insertion might be the leading reasons for his delayed consultation. With the penis growing, the needle gradually stimulated the urethra and resulted in tingling sensation.

It has been widely accepted that management of foreign bodies aims to provide complete removal of the foreign body with minimal complications. Urethrocystoscopic extraction of most urethral foreign bodies with help of forceps, snares, and/or baskets is generally successful. In this case, 8F ureteroscopy was inserted and the rusted needle was visualized with the sharp end trapped in the urethral mucosa. The grasper was used to grasp the needle, and it was successfully removed.

Conclusion

In conclusion, the occurrence of urethral needle insertion among children is relatively rare. Most patients have symptoms including hematuria, urethral pain and remarkable voiding discomfort and elicit the urethral foreign bodies insertion history. It is rarely considered when the patient has mild urination symptoms. Our objective of this case report is to remind urologists and pediatrician of the possibility of urethral foreign bodies and recommend scrotal ultrasonography as the first examination modality.

Ethical approval

Written informed consent was obtained from the patient's wife for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

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Authors' contributions

Kaimin Guo drafted the manuscript. Song Wang, Kaimin Guo and Shengqi Xu acquired the clinical data and performed the surgery. Jingguo Wang provided imaging support.

Declaration of competing interest

The authors declare that there are no competing interests associated with the manuscript.

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References

1. Naidu K, Chung A, Mulcahy M. An unusual urethral foreign body. *Int J Surg Case Rep.* 2013;4:1052–1054.
2. He Y, Zhang W, Sun N, Feng G, Ni X, Song H. Experience of pediatric urogenital tract inserted objects: 10-year single-center study. *J Pediatr Urol.* 2019;15:554.e1–554.e8.
3. Zaghbib S, Ouanes Y, Chaker K, Ben Chehida MA, Daly KM, Nouria Y. Urethral self-inserted sewing needle in a 14-year-old boy for autoerotic stimulation. *Urol Case Rep.* 2019;25:100894.
4. Park S, Moon KH, Kim SH, et al. Needles as urethral foreign body in a child: successful removal using a new method with a laparoscopic needle holder. *Urology.* 2013;81(1): 188–190.