

Self-insertion of foreign body (hairpin) in urethra and its removal by non-operative technique

Vaibhav Vishal¹, Lal Darsan², Manikandan M³, Venugopalan AV⁴, Felix Cardoza⁵

From ¹Senior Resident, ²Assistant Professor, ³Professor and Head of Department, Department of Urology, Calicut Medical College, ²Senior Resident, ⁴Professor and Head of Department, Department of Urology, Government Medical College, Calicut, Kerala, India

Correspondence to: Dr. Vaibhav Vishal, Department of Urology, Calicut Medical College, Calicut - 673008, Kerala, India. E-mail: drvvs123@gmail.com.

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ABSTRACT

A urethral foreign body is usually found as a part of sexual misadventure mostly in a young male. The literature has described items like a fork, battery, wire and other things in the urethra which almost always required a surgical procedure for its removal. Here we present the case of self-insertion of a hairpin in the male urethra with the open pointed end of hairpin facing distally. The hairpin despite being “stuck” inside the urethra due to its sharp end embedded in urethral mucosa was successfully removed with simple manipulation techniques with no complication in follow-up. This case highlights the point that when faced with the situation of an uncommon object in the urethra, the treatment has to be individualized according to the type of object, age and sex of the patient and sometimes common unorthodox technique can save the patient from operative procedure.

Keywords: Foreign body urethra, Hairpin, Non-operative removal, Sexual misadventure.

Self-insertion of the urethral foreign body usually presents an emergency. The attempt of self-pleasure is mostly done by younger adults usually male under the influence of alcohol or psychiatric illness. Variety of object has been reported in the literature including needle [1], wire [2], fork [3] and tongue cleaner in urethra [4]. Most of them required a surgical procedure for removal.

In the present case, despite having a foreign body with sharp ends fully inside the urethra, a major surgical process was avoided by manipulative techniques. We describe the manipulative technique followed by a review of the literature.

CASE REPORT

A 17-year-old male presented to surgical emergency with a history of self-insertion of a foreign body in the urethra as a part of self-pleasure experiment six hours before presentation. The patient presented with complaints of severe urethral pain, retention of urine and mild urethral bleed.

On examination, the vitals were stable and general examination was unremarkable. On local examination, blood was seen at meatus during an inspection. On palpation, mild tenderness was present at the shaft of the penis with hairpin being palpable with its sharp distal ends approximately 3cms from meatus and in total, the pin measuring approximately five cms in length. A radiographic image was suggestive of the hairpin, with the open end facing distally towards urethral meatus (Fig. 1).

A gentle percutaneous milking of the pin was performed after insertion of lignocaine jelly and towards meatus but the attempt

was unsuccessful as ends of hairpin were “fixed” to the urethral mucosa. A tourniquet was tied at the base of the penis, proximal to hairpin and urethra was filled with lignocaine jelly serving the dual purpose of local anesthesia and dilatation of the urethra distal to the tourniquet. As open ends of hairpin were facing towards meatus any forceful attempt to move pin distally would have led to the urethral injury. So to overcome this problem, two small mosquito forceps were introduced sequentially and was guided percutaneously towards the “arms” of the pin.

Once both arms were held by mosquito forceps, each arm with different mosquito forceps, a gentle proximal movement was done to dislodge the pointed ends of the hairpin arm from urethral mucosa. Once dislodged, mosquito forceps was crisscrossed by moving both of them towards each other thus effecting closure of the pointed ends of the pin. Once the pointed ends were closed, the pin was gently pulled out of meatus (Fig. 2).

There was no bleeding or any urethral injury during the attempted removal. A 14-fr Foley catheter was introduced and the patient was discharged. The patient was followed-up in OPD after seven days. The Foley catheter was removed and the patient voided normally.

DISCUSSION

In the literature, the variety of foreign body urethra with varied clinical presentation has been reported. Those presenting immediately mostly had a bleeding urethra, retention of urine or pain, while the delayed presenting patient can have the infection



Figure 1: X-ray pelvis showing hairpin inside the urethra and pointed end facing urethral meatus

and sepsis. Metallic or hard foreign body in the urethra is generally palpable and X-ray is sufficient for confirmatory diagnosis.

A gentle attempt is generally made percutaneously to remove the object. A non-sharp object like a vegetable, toys, keys, nuts can be removed by holding with forceps but in case of sharp object blind holding and removal of the object may aggravate the urethral injury. Due to the complexity of the structure of hairpin with the open pointed end facing towards meatus highlights the importance of individualizing the treatment as direct removal was not possible. Though cystoscopy could have helped by pushing the hairpin in bladder thus relieving acute obstruction and pain, it could have aggravated the urethral injury due to the bushing of the sharp end of hairpin throughout urethra during pushing it back to the bladder. It would eventually require a cystostomy for removal.

In the present case, after a single dose of IV antibiotic [5], applying the tourniquet and filling the urethra with lignocaine jelly dilated the urethra. A gentle manipulation, minute proximal movement and crisscrossing the two mosquito forceps after holding both arms of hairpin helped to dislodge the pin ends from the urethra and avoided further injury during removal as pointed end of hairpin were in closed position.

Though a meatotomy could have made the procedure easier; however, as the patient was unmarried and young, an attempt was made to avoid meatotomy. Following removal, cystourethroscopy is important to diagnose urothelial injuries. Most of the reported cases in which foreign body was not seen projecting out of meatus, an invasive procedure like external urethrotomy, or meatotomy were required. Thus adding to cost, invasiveness and apprehension of treatment. Urethral strictures with 5% incidence are the most common delayed complication. Thus, appropriate follow-up is essential to monitor the development of complications. Personality disorders, sexual curiosity may be occasionally found, thus psychiatric counseling is recommended in such cases [6,7]. Though successful, this procedure should be used with extreme caution and with an expert hand, otherwise, it can aggravate the injury and complicate the further management protocol and psychiatric evaluation of the patient should be advised to avoid such future misadventures [8].



Figure 2: Arms of hairpin held with artery forceps and crisscrossed to "close" the hairpin

CONCLUSION

This case is unique as the incidence of self-insertion of a foreign body in the urethra is rarer than the insertion in rectum or vagina. The above-reported case required prompt decision making in an emergency set up at midnight with the patient in urinary retention and pain. After appropriate investigation, removal was attempted. Use of two mosquito artery forceps to close the open end of the hairpin is unique and novel and has not been described before. The procedure did not cause any urethral injury and it avoided the need for anesthesia, cystoscopy or open surgical procedure.

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