

Case Study

Endoscopic management of intravesical foreign body: A challenging condition.

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Abstract

Background: Unusual genitourinary activity is categorized by the genital deposit of foreign objects. It has been known for centuries and common etiological factors include sexual stimulation. Psychiatric disorders and intoxication may also be associated. Foreign body retrieval and the evaluation of psychosocial factors are involved in management. This study intends to present a 'hair pin' case as a foreign body in the bladder.

Methodology: A 25-year-old female presented to the urology outpatient clinic in early pregnancy with a history of manually inserting hairpin into the urinary bladder through her urethra four years back. She lost to follow up during pregnancy and then presented again after C-section. A plain abdominal film of the kidneys, ureters, and bladder (KUB) confirmed the location of the hairpin and large stone around it in the urinary bladder.

Results: The patient underwent endoscopic removal of foreign body and stone. At cystoscopy urethra was normal, but in the urinary bladder, there was a hairpin with stone formation at its proximal end, and distal portion of the hairpin was embedded in the bladder neck. The hairpin was pushed back in the bladder to separate from the bladder neck, followed by stone fragmentation using a stone punch. After complete removal of stones, the hairpin was aligned in the line of the urethra and removed with the help of forceps.

Conclusion: Depending on the nature of the foreign body and available expertise, methods for removing intravesical foreign bodies are opted. Mostly endoscopic techniques are used for retrieval of intravesical foreign bodies without resorting to open surgery.

Keywords

Endoscopy, Intravesical, Foreign Body.



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Introduction

The foreign body in the urinary bladder is relatively an unusual finding in urology emergencies, which has always caused wide attention. Intravesical foreign bodies are usually found as a result of iatrogenic injuries, self-insertion, sexual abuse, assault, and migration from adjacent sites¹.

In previously reported literature, foreign bodies in the urinary bladder are of a wide variety, including electrical wires, pencils, bullets, intrauterine contraceptive devices, parts of catheters, etc². Embarrassment to discuss the actual history by patients leads to delay their presentation until the lower urinary tract symptoms occur in self-insertion cases. The imageological examinations are helpful for diagnosis and treatment, especially in some patients with no clinical findings.

Minimally invasive endoscopic management techniques are preferable for the majority of cases; however, open surgeries are also required in special cases due to object size and shape³⁻⁶. Here we share our experience dealing with 'hair pin' as a foreign body in the bladder, which may be the first one according to the reported literature.

Methodology

A 25 years old female housewife presented with a history of insertion of the hairpin as a part of sexual gratification four years back. The patient had complaints of lower urinary tract symptoms like dysuria and episodic hematuria, but she did not visit any doctor as the patient was embarrassed to disclose the history. In due course, the patient got married, and during her pregnancy, symptoms worsened with dysuria and hematuria. Her

antenatal ultrasound showed an intravesical foreign body, so she consulted urology for the first time as an outpatient. She was advised to complete the pregnancy and follow in the urology outpatient clinic periodically, but the patient lost to follow up.

The patient had her C-section done outside our institution, and then on worsening of urological symptoms, she consulted urology again. She was admitted for a workup. Her ultrasound and x-ray KUB were done to assess the nature and position of the foreign body. Images showed a hairpin with a stone formation around it (Figure 1).

Management & Results

The patient was planned for cystoscopy followed by endoscopic or open removal of foreign body and stone. On cystoscopy urethra was normal, but in the urinary bladder, there was a hairpin with stone formation at its proximal end, and distal portion of the hairpin was embedded in the bladder neck (Figure 2).

Initially, the distal portion of the hairpin was pushed back in the bladder to separate from the bladder neck, followed by stone fragmentation using a stone punch (Figure 3). After complete removal of stones, the hairpin was aligned in the line of the urethra with the help of forceps and subsequently removed (Figure 4).

After successful completion of the procedure, a per urethral catheter was placed, which was removed on the first post-operative day. The patient voided well and was discharged on the same day. On follow-up after one week, the patient had no lower urinary tract symptoms, and she was happy.



Figure 1: Pre-op x-ray KUB showing hairpin with stone in the bladder



Figure 2: Hairpin with stone formation at its proximal end & the distal portion of hairpin embedded in the bladder neck

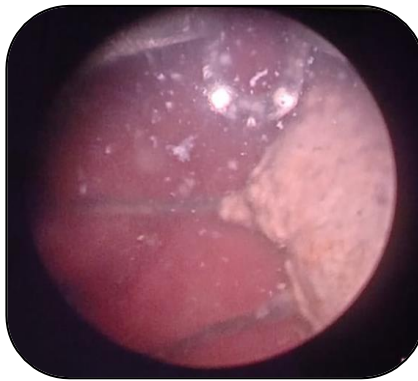


Figure 3: Hairpin with stone pushed back in bladder & stone fragmented with a stone punch



Figure 4: Hairpin removed after stone fragmentation

Discussion

Self-insertion of foreign bodies into the urethra occurs most often in the setting of attempted sexual stimulation, psychiatric illness, and intoxication². A broad range of objects has been reported in the urethra and bladder, including pens, pencils, cotton swabs, tampons, needles, screws, rubber, rocks, eye-wear, straws, and marbles^{3,4}. Reported symptoms include haematuria, dysuria, frequency, pelvic pain, poor stream, urinary retention, and urgency incontinence³⁻⁵. Plain radiographic imaging is useful for locating objects, identifying object size and number, and determining if the objects are

calcified to optimize preoperative planning. Reported management techniques include cystoscopy, meatotomy, internal urethrotomy, and open cystostomy^{3,6,7}. An element of ingenuity is often required with endoscopic management, and devices such as forceps, snares, and stone retrieval baskets have been utilised⁸. The best management depends on the nature of the foreign body, lodged site, expertise of the surgeon, and available instruments. It is noteworthy that operative complications such as urethral injury, urethral stricture, and nerve injury for impotence should be avoided to the greatest extent, either in endoscopy or open operation. We report the case of intravesical insertion of the hairpin as a foreign

body which was successfully removed with endoscopic technique. Several attempts were made to identify the cause of such harmful object insertion, but the patient and his family denied any history of psychiatric illness. Another possible cause may be sexual gratification, but failure to present earlier because of embarrassment made her whole pregnancy worse.

Conclusion

It is concluded that intravesical foreign bodies are not unusual, its presentation might vary and possess diagnostic challenges. Hence the patients presenting with chronic lower urinary tract problems must be diagnosed for the presence of these foreign bodies. For the determination of exact size, number, and nature, radiological evaluation is necessary. Most intravesical foreign bodies can be retrieved with endoscopic and minimally invasive techniques without resorting to open surgery.

Conflicts of Interest

The authors have declared that no competing interests exist.

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