



(CASE REPORT)



Pen cap in the urinary bladder: A rare type foreign body in the urinary bladder in a 16 years old female

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Abstract

Foreign body in the urinary bladder is a rare urological presentation and in most cases are due to self-insertion usually for autoerotic stimulation. We presented a case of 16 years old female who presented with history recurrent urinary tract infection for 6 months. After thoroughly work up she was diagnosed to have a pen cap in her urinary bladder. The foreign body in the urinary bladder was detected by abdominal ultrasound, Kidney, Ureter and Bladder (KUB) X-ray did not detect any abnormal radiopaque material in the area of the urinary bladder or upper tract. At cystoscopy, one pen cap was identified and removed successful.

Keywords: Foreign body; Bladder; Urinary tract infections; Endoscopy

1. Introduction

Urinary bladder foreign body (FB) is among the uncommon cases encountered by practicing urologist and it almost always iatrogenic through transurethral or trans abdominal routes. Rarely, there may be foreign body in urinary bladder migrating from adjacent organs. Self-insertion of objects in the urethra/urinary bladder is usually as a result of autoerotic stimulation, mental illness, senility, iatrogenic causes or substance abuse [1-4].

Patients with foreign bodies may be asymptomatic or may present with lower urinary tract symptoms such as dysuria, hematuria, suprapubic pain and difficult voiding. Other patients may present with recurrent urinary tract infections, encrustation around the FB, perforation of urinary bladder and hydronephrosis with or without renal insufficiency [3-5].

The method of removal of urinary bladder FB depend on the shape, size and nature of object and can be done through minimally invasive procedures such as endoscopic and if it fails, in most cases open surgery remains the option. Here we are reporting a case of pen cap in urinary bladder which was removed endoscopically.

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2. Case Report

A 16 year old female presented with history of lower abdominal pain for 6 months that was dull in nature, worsened by full bladder, non-radiating but associated with painful urination. She denied any history of hematuria, inability to pass urine or involuntary loss of urine. She has been treated for urinary tract infection (UTI) three times, with recurrent of symptoms within a short time after treatment. The pain got worse for the last 3 weeks prior to admission during which she visited a nearby health facility, where abdominal ultrasound revealed an abnormal structure in the urinary bladder. She was then referred to our health facility for further work up.

In past medical history she reported have hymenotomy 18 months ago after being diagnosed with imperforate hymen at nearby health facility. However there is no history of urethral instrumentation, admission or chronic medication.

She is second born in a family of 3 children. She had completed her ordinary level education waiting for results to continue with advanced level education. She denied any history of coitus or dating anyone. She neither drinks alcohol nor smoking.

On general examination; She was health looking calm, oriented to people, time and environment, cooperative, and smart. Abdominal examination was unremarkable. On inspection of external genitalia; there was no skin lesion, the hymen had longitudinal defect at the center.

Full blood count, serum creatinine and random blood sugar were all within the normal limits, urinalysis revealed 5-10 white blood cell / HPF, no red blood cells or nitrites was detected. However clean-catch mid-stream urine culture revealed no bacterial growth. Abdominal pelvic ultrasound showed an echogenic lesion in the urinary bladder measuring 45 x 12 mm with poor posterior acoustic shadow. Kidney, ureter and bladder (KUB) x-ray was normal (figure 1).

The patient was scheduled for urethrocystoscopy under spinal anesthesia where the urethral was normal but there was a floating blue coloured structure with early encrustation was identified in the bladder where upon careful inspection it was found to be a pen cap.. The pen cup was removed by grasper forceps in the longitudinal direction (after several attempts to put it in the longitudinal direction) and pulled up to distal urethral where it slipped off. With finger in the distal vaginal the cap was felt in the urethra and milked out easily. After removal of the pen cup, we re-scoped the urethra and bladder where we found the urethral to be normal but there was a small superficial laceration on the bladder neck at 3 o'clock that was oozing blood. A 20 French foley catheter was kept for 3 days postoperative. The procedure took 30 minutes and the main challenge was to grasp the pen cap in longitudinal direction.

Upon enquiring further after we found the FB and removed it, she claimed that she used to scratch her genital area by her fingers due to itching and pain for the last 1 year. On one of the days, she was using a pen cap instead of her finger, which accidentally slipped from her hand and disappeared. She could not figure out whether it went inside her secret parts or not but she could not see it on the surrounding environment. Although she denied doing it for pleasure, was counseled and advised to stop introducing FB in the secret parts.as it may result into many complications.

She had uneventful postoperative period therefore was allowed home on day three and scheduled for follow-up clinic after one month which she attended and reported to be fine with no more pain and skin itching as before. . She has been kept on serial follow up visit to see how she is doing with regard to FB use.in the secret parts.



Figure 1 Normal Kidney, Ureter and Bladder X ray with no radiopaque foreign body seen

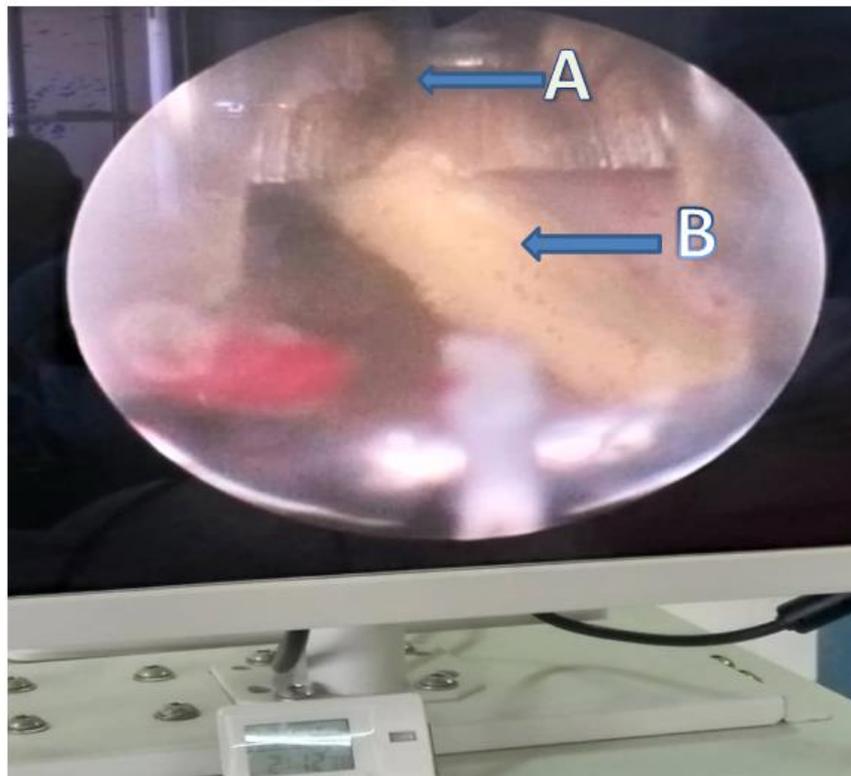


Figure 2 A A cold cup forceps holding one end of pen cap B: Pen cap in the urinary bladder with early encrustation.

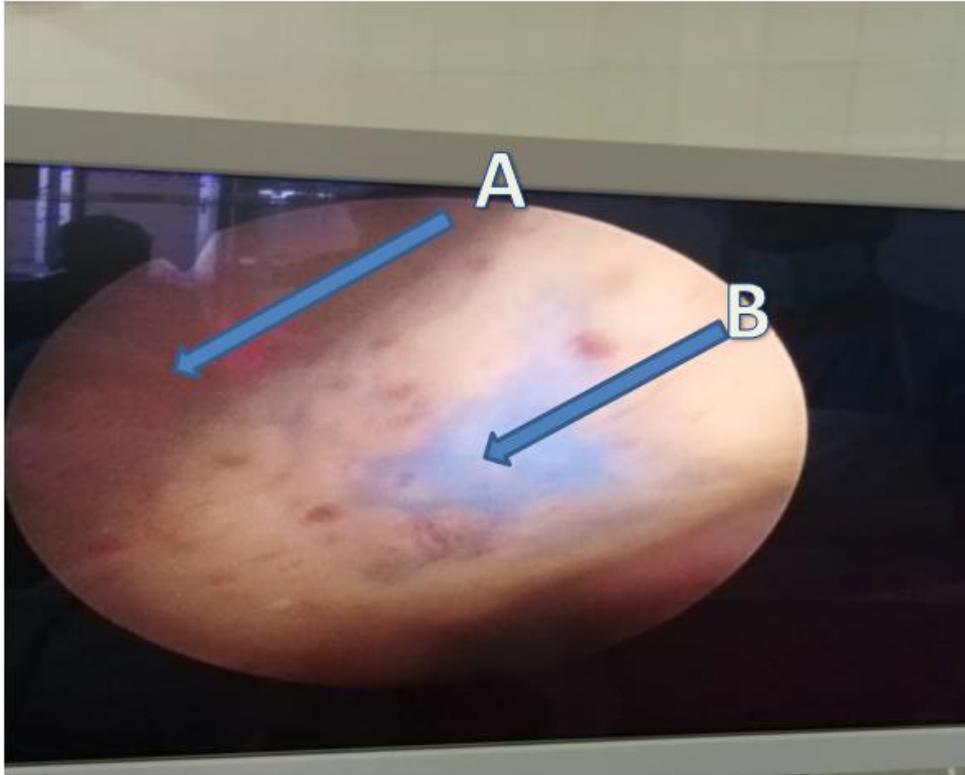


Figure 3 A Bladder mucosa B: Early encrustation partly removed on the pen cap in the bladder.



Figure 4 The pen cap after its removal from the bladder

3. Discussion

Cases involving FB in the urinary bladder have been reported worldwide [1]. They are introduced via the transurethral route in 60% while trans-bladder wall route contributes about 30% of cases. [1]The most common reason for self-insertion of a foreign body into the urethra was of erotic or sexual nature (80%) while trans-bladder route is iatrogenic [1,4].

Other cases of self-insertion may be associated with psychiatric disorders such as schizoid personality disorder or borderline personality disorder, intoxication or mental confusion [6- 8].

Some individuals may insert foreign bodies in order to relieve urinary retention or in attempt to treat incontinence [1,4,6,7].There are also cases of iatrogenic urinary bladder FB introduced via trans abdominal others through transurethral route. [9-12].

A wide range of foreign bodies has been reported in the urinary bladder, including electrical wires, chicken bones, wooden sticks, thermometers, bullets, intrauterine contraceptive devices (IUCDs), encrusted sutures, surgical staples with stones, needles, pencils, household batteries, gauze, screws, pessaries, ribbon gauze, parts of Foley catheters, broken parts of endoscopic instruments, and knotted suprapubic catheters [4]. In our case it was a pen cap, one of the uncommon kinds of FB in the urinary bladder

Obtaining an accurate history from patients with this condition may be difficult, especially for patients who insert objects for sexual pleasure, because they fear of telling the event. Therefore patients may present late with symptoms of lower abdominal pain, gross hematuria, bladder irritation, and recurrent urinary tract infection [12,13]. Depending on the type of material making the FB, investigations may not always be conclusive. In our case the FB was picked by ultrasound but, abdominal X-Ray did not capture it as it was not radiopaque.

Removal of FB can be done through several grasping tools such as stone basket, grasping forceps, stone punch, snares and other modified instruments. The success rate for endoscopic removal of FB ranges between 50 to 94%. If endoscopy removal fails, open surgery is an alternative [12,13].

In our case we faced difficult in holding the pen cup in longitudinal direction so as to remove the pen cup without causing trauma to the urethra. We managed to hold the pen cup in longitudinal position and pulled it to distal urethra where we removed it by milking with aid of finger in the vagina. However, there was minor laceration at the bladder neck that was managed conservatively by keeping the urethral catheter for 3 days.

Some urologist have successful removed FB by percutaneous, laparoscopically and also by mechanical lithotripter [14].

4. Conclusion

It is important to investigate thoroughly any patient with recurrent UTI to rule out possibility of urinary tract abnormality like presence of foreign body. Endoscopic foreign body removal is preferred option of management.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

The authors declare that they have no competing interests.

Statement of informed consent

Written informed consent was obtained from the patient's parent for publication of this case report.

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