

Functional Urology

‘What goes in, could come out’ - A case report: Endoscopic extraction of a giant foreign body from a female urinary bladder

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ABSTRACT

Foreign bodies in the urinary tract are quite rare. The etiology for this phenomenon is variable. The extraction of those objects should be done in endoscopic manner whenever possible. The larger the object's diameter, the harder it will be to extract. According to recent literature the female urethra can calibrate up to 54 Fr (1.8 cm). The case which presented here demonstrates an endoscopic extraction of an object of 2.5 cm diameter (75 Fr.). Our paper aims to suggest strategies for successful endoscopic extraction and to shed more light on the skills and inter-specialty collaboration that these cases needed.

1. Introduction

Foreign bodies in the urinary tract are occasionally reported, especially in the urethra and the bladder. Intravesical or intraurethral foreign bodies are usually found as a result of iatrogenic injuries, self-insertion, sexual abuse, assault, inquisitiveness, and mental disorder. The foreign bodies are diverse and their extraction involves, whenever possible, improvised maneuvers or endoscopy to avoid as far as possible recourse to open procedure, which sometimes is inevitable.

When the object has features such as serrated shape or sharp edge and in case of male's urethra which is much longer and entangled, endoscopic extraction is anticipated to be much more challenging. The clinical case that presented here exemplifies the complex skills and inter-specialty collaboration necessary to provide care in these patients.

2. Case presentation

A twenty nine year old woman was admitted to our emergency department with complaints of dysuria and abdominal discomfort after self-inflection of crystal “dildo” via her urethra during intercourse. The object accidentally pushed inside the urinary bladder without the ability to pull it out. After a few hours of self-failed attempts to extract the object, she came to our institution. At the presentation, she complained of dysuria and abdominal discomfort. Her physical examination was unremarkable. During examination of external genitalia, her introitus

was normal, urethral meatus was wide without any lacerations and no object was observed inside the meatus. Her gynecological examination was also unremarkable.

3. Imaging

The patient underwent a bedside ultrasound by ER physician, which demonstrated a foreign body about 10 cm long inside the urinary bladder. The uterus was demonstrated with an IUD inside it. Pelvic abdominal x-ray and non-contrast CT scan (Fig. 1) demonstrated a foreign body of 9 cm long and 2.5 cm wide inside the urinary bladder placed horizontally and pushes the lateral walls of the bladder. Wide broad intravenous antibiotics were administered. After careful discussion and following informed consent, the decision was made to proceed with an endoscopic attempt to extract the object. It was explained to the patient that if endoscopic procedure will fail, an open procedure will be performed under the same anesthesia.

4. Surgery

Under general anesthesia with LMA a diagnostic cystoscopy was performed and demonstrated the crystal object placed horizontally inside the bladder causes local pressure on the bladder lateral wall. Then an operative 24Fr. cystoscope (Olympus) was introduced. Alongside the cystoscope endo-loop (G&G) was introduced through the urethra. The foreign object was stabilized in the vertical position utilizing the

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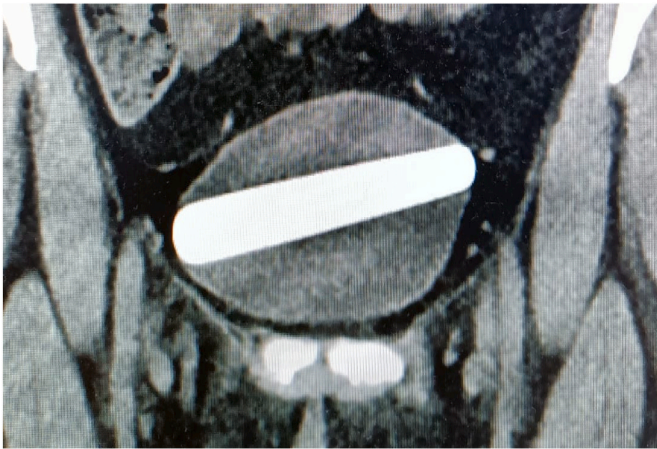


Fig. 1. Non contrast CT scan.

cystoscope grasper (Fig. 2A), while the upper end of the object was engaged with endoloop with assistance of another surgeon (Fig. 2B). Then after the object was carefully pulled out utilizing the endoloop and advanced into the bladder neck until complete extraction of the foreign body via the urethra (Fig. 3). The cystoscope was taken out and 16Fr. indwelling urinary catheter was inserted. The urinary catheter was taken out on the same day and the patient was discharged home after normal urination and complete bladder emptying.

5. Discussion

Foreign bodies in the urinary bladder are quite rare due to the relative protection of the bladder by surrounding organs. The bladder lies behind the pubic bones and anterior to the lower intestine. That makes the bladder almost inaccessible. There are two main ports of entry for foreign bodies in the bladder. The first is migration through proximal structures such as surgical stitches or meshes. The second is insertion of an object via the urethra.¹ The etiology for the last is variable from self inflection due to sexual gratification or due to iatrogenic injury.² The common symptoms of bladder foreign body include frequency, dysuria, hematuria, incontinency, external genitalia swelling and acute urinary retention. It has been reported that the possibility to remove bladder foreign body endoscopically is about 50%, the others will need open procedures such as cystotomy.³ Cystotomy will be indicated when the surgeon convinces that endoscopic extraction is too risky according to the object's characteristics, anatomical abnormalities and the patient's gender and age. That depends on the object's size, shape and other parameters such as gender.⁴ In male's urethra due to the length and its entangled features, endoscopic extraction is much more challenging. It has been speculated that as far as the object is wider, it will be more difficult to remove it endoscopically. It has been shown that the female urethra could be calibrated up to 54 Fr. (1.8 cm diameter) without any serious consequences.⁵ Therefore, endoscopic removal of an object wider than 1.8 cm in diameter is expected to be extremely challenging. In the presented case, we have hypothesized that if the patient independently managed to insert the object through the urethra, it would also be possible to remove it that way. However, we also have received the patient's consent in advance that, if necessary, we would perform a cystotomy. Eventually, as described above, we were able to remove the object in an endoscopic approach. To the best of our knowledge this is the widest object removed endoscopically ever since (2.4 cm in diameter). As mentioned above, we attribute our success to the fact that the patient routinely performed urethral dilations for sexual gratification (which made the urethra wide enough for extraction) and to our "fishing" strategy by which we have engaged the object and were able to pull it out via the bladder neck and then through the urethra.

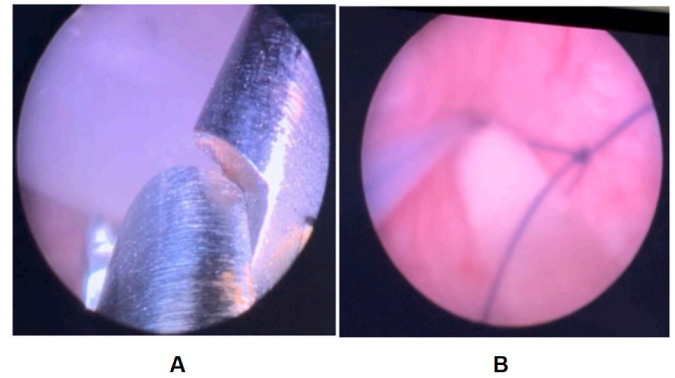


Fig. 2. A- Reposition of the object. B- Fishing of the object.



Fig. 3. The extracted object.

6. Conclusions

A careful and proper evaluation of a patient's complete medical history combined with imaging modalities is necessary to assess a foreign body in the urinary tract. Total removal and complete clearance are the main principles in the management of this case to avoid the risk of further bladder injury. We do recommend cystoscopy for both diagnosing and extracting the foreign body. We do think that psychiatric evaluation is mandatory in these cases to prevent recurrences.

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