
Case report

A foreign body in the urethra

Almost every imaginable object has been inserted into the urethra. This case report describes the presentation and management of this unusual phenomenon.

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Self-insertion of foreign bodies into the urethra is a phenomenon encountered in both general medical and urology practice. Cases involving urethral foreign bodies occur frequently and have been reported since the earliest days of the medical literature. Diagnosis is based largely on the history and physical examination; however, radiographic or cystoscopic studies may be required to confirm the diagnosis and to determine appropriate treatment. The management of patients with urethral foreign bodies includes extraction of the object and further treatments as needed for the prevention of long-term complications. In addition, assessment of the patient's motivation and possible psychiatric referral may be indicated. Thus, a multidisciplinary approach is required for patients who have urethral foreign bodies.

In this report, we present a typical case involving a urethral foreign body. A review of the relevant medical literature is included so that the clinician can gain a comprehensive understanding of this unique medical condition.

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Case report

A 66-year-old white man presented to a local emergency department with fever and severe dysuria. He was admitted for antibiotic treatment of urosepsis. CT was performed and identified a tubular metallic object in the patient's urethra. After discharge from the hospital, the patient was referred for definitive urologic evaluation of this finding.

At his urology consultation, the patient complained of a palpable object protruding from the upper scrotum and base of the penis. He suspected that a surgical instrument had been left in his body accidentally during repair of an inguinal hernia 20 years previously. We had followed him in the past for management of lower urinary tract symptoms attributed to benign prostatic enlargement, erectile dysfunction, and urinary tract infections. Three months ago, he underwent cystoscopy and intravenous pyelography as part of a work-up for these urologic conditions. Results of these studies were within normal limits.

The patient's medical history was significant for hypertension, depression, and a pituitary adenoma. He is a divorced father of two children and denied using alcohol, tobacco, or illicit drugs.

On physical examination, the patient was found to be obese but in no acute distress. All of his vital signs were within normal limits. The only pertinent positive finding was a palpable hard, thin mass that appeared to be

protruding from the upper scrotum and base of the penis. There was no associated external swelling or erythema. The findings on a digital rectal examination were normal.

Pelvic radiography identified a radiopaque object in the lower pelvis (see the radiograph). Subsequently, flexible cystoscopy was performed, which demonstrated a gold-colored, metallic tubular object impacted in the urethra. The size and position of the object precluded complete examination of the posterior urethra and bladder. The patient was subsequently taken to the operating room for definitive management. Multiple attempts to remove the object endoscopically were unsuccessful, so surgical exposure of the urethra was performed via a midline penoscrotal incision. The object was removed in two parts through urethrotomy and was identified as a ballpoint pen without an associated ink cartridge (see the Figure). The urethral defect was then closed in multiple layers with absorbable sutures over a 20 French catheter.

The patient tolerated the procedure well, and there were no significant complications. The next day, he was discharged home with an indwelling urethral catheter. The catheter was removed 2 weeks after the surgery, and the patient voided without difficulty. On further questioning, the patient denied inserting this object himself or that it was inserted by another person. A psychiatric referral was offered, but the patient refused.

Discussion

Various case reports describe unusual and seemingly dangerous objects in the urethra. The objects identified have included nuts, bolts, pens, pencils, toothbrushes, pocket batteries, fishhooks, shards of glass, pistachio shells, and animal parts (see Table 1, page 50).^{1,2} In one particularly unusual case, an 89-year-old man developed urinary retention for 5 days due to a lobster tentacle impacted in his urethra.³

Some case reports describe patients who have inserted multiple objects into the urethra at the same time. In one report, a 94-year-old man with dementia was found to have multiple foreign bodies in the urethra. These were removed and identified as a 10-cm ballpoint pen cartridge, a 10-cm metal rod, an 8-cm razor brush, a 7.4-cm plastic rod, a 4-cm broken rubber band, and a paper clip.⁴ In addition, objects inserted into the urethra frequently migrate into the bladder spontaneously, during attempted removal, or when the pelvic muscles are contracted.^{1,5}

Patients with retained urethral foreign bodies most often present with painful urination, frequency, and hematuria. Larger objects may cause complete urinary obstruction. However, there are reports of ob-

jects remaining in the urethra for many years without causing any significant urinary symptoms.⁶ Shame and humiliation may prevent patients from volunteering that an object is in the urethra, leaving the clinician to identify the cause of symptoms. Even when the object is extracted and presented to the patient, the majority of patients will adamantly deny knowledge of it.^{5,7} We observed this to occur in our patient, who denied self-insertion despite direct evidence to the contrary.

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Key Points

- Cases involving urethral foreign bodies occur frequently, and self-insertion of urethral foreign bodies is not unusual.
- A thorough history and physical examination is usually sufficient for diagnosis, although imaging studies may be needed in some cases.
- Determining the best method of removing the foreign body and repairing any damage can be challenging.
- The rationale for self-inserting a urethral foreign body should be investigated in order to prevent recurrence of the problem.

Competencies

Medical knowledge	◆◆◆◆◆
Interpersonal & communication skills	◆◆◆
Patient care	◆◆◆
Professionalism	◆◆
Practice-based learning and improvement	◆◆
Systems-based practice	◆

For an explanation of competencies ratings, see the table of contents.

FIGURE



This ballpoint pen was surgically removed from the patient's urethra.

A thorough history and physical examination are usually sufficient to diagnose a urethral foreign body. In a study of 17 patients treated for self-inserted urethral foreign bodies, the object was found to be palpable in all cases.⁵ In addition, most inserted objects are radiopaque and can be readily identified on plain film radiography. In selected cases, CT, MRI, or ultrasonography may be necessary to obtain the proper diagnosis. Furthermore, cystoscopy is an important tool to visualize the object in the urethra and determine the most appropriate method for removal. Aside from the urinary symptoms produced by mechanical urethritis, urinary tract infection is common and can be severe. In one reported case, a man died with gangrene of the genitalia and septicemia caused by a retained urethral foreign body.⁸

Although diagnosis of urethral foreign bodies is usually straightforward, determining the optimal method for removing and repairing the damaged urethra can be challenging. The preferred method for extraction depends on the size, location, and mobility of the retained object. Endoscopic extraction with a retrieval device such as a grasper, forceps, or stone basket is successful in the majority of cases.^{1,5,9} Objects such as fishhooks and other sharp objects may travel readily in only one direction. Therefore, it may be necessary to push the object into the bladder before endoscopic retraction can be attempted. If an object located in the bladder cannot be removed endoscopically, open cystostomy through an incision in the low abdomen is indicated.¹ Objects in the urethra can cause severe irritation, abscesses, or urethral tears. In the setting of severe urethral inflammation, open urethrotomy is usually necessary for extraction.

Typically, foreign bodies are inserted into the urinary tract because of sexual curiosity, pathological masturbation, mental illness, or intoxication. Aliabadi and colleagues reported that reasons for self-instrumentation in their population of 18 patients included autoeroticism in 33%, overt psychiatric causes in 11%, and to aid in voiding in 39%; in 17%, no definite reason could be ascertained.⁷ Another series reported that in nearly 100% of the cases in males and 85% of those in females, objects were self-inserted for erotic or sexual

TABLE 1
Objects self-inserted in the urethra

45-cm decapitated snake
4-pronged fork
Chewing gum
Coyote's rib
Fishhook
Hairpins
Iron wires
Matches
Metal rods
Necklace
Needles
Pencils
Pins
Pipe stems
Razor blade
Screws
Squirrel tail
Straws
Toothbrush

Data from Van Ophoven A, deKernion JB.¹

purposes.¹ This behavior has been encountered in both genders, in children and adolescents, and even in the very old. As an example, a 90-year-old man with dementia manifested symptoms of urethral masturbation and sexual disinhibition by repeatedly inserting foreign bodies into his urethra. Treatment with low doses of the antipsychotic haloperidol significantly reduced this behavior.¹⁰

The long-term complications of urethral foreign bodies include urethral strictures, urethral diverticulum, and erectile dysfunction. The rationale for the behavior should be investigated to prevent recurrence. Given the high frequency of comorbid psychiatric illness in this patient population, psychiatric evaluation should be considered.^{1,5,11} Whether the patient should receive this care acutely in the inpatient setting is subject to debate, but nonadherence to treatment recommendations may make follow-up care after discharge difficult. Studies regarding repetitive urethral self-insertion and management of long-term complications are lacking.

Self-insertion of urethral foreign bodies is a common phenomenon, and clinicians should expect to encounter this entity during their careers. The vast array of objects inserted into the urethra defies imagination, and the rationale for this behavior is diverse and often perplexing. Urethral foreign bodies should be considered in the differential diagnosis for unexplained urinary symptoms, especially in patients with comorbid psychiatric conditions. □

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