‘Putting lead in your pencil’: self-insertion of an unusual urethral foreign body for sexual gratification

Nishant Bedi • Tamer El-Husseiny • Noor Buchholz • Junaid Masood

Department of Urology, Bart’s and The London NHS Trust, London, UK
Correspondence to: Junaid Masood. E-mail: junaido@aol.com

We review motives for insertion of foreign bodies into the urethra and discuss presentation, diagnosis and management of such patients.

Introduction

Self-insertion of foreign bodies into the urethra and bladder, usually for sexual gratification and auto-eroticism especially during male masturbation, is an unusual but important condition which urologists will encounter. Patients thereafter usually feel embarrassed and tend to avoid seeking immediate medical help. The urological consequences of this type of behaviour can be significant and the implications for patients can be serious including death from sepsis. Over the last decade, reports in the literature of self-inserted intra-vesical and intra-urethral foreign bodies have increased. We present a case of self-insertion of household batteries into the urethra for sexual pleasure during masturbation. We review possible motives for insertion of foreign bodies in to the urethra and discuss clinical presentation, as well as diagnosis and management of such patients.

Case history

A 62-year-old man was referred to us from a nursing home by staff concerned that he had apparently passed a small household (AAA size) battery per urethra. The patient was in pain with difficulty in passing urine. Relevant in his past medical history was that one year previously we had endoscopically removed a pen lid from his bulbar urethra. He also had right-sided hemiplegia following a cerebrovascular accident (CVA) 10 years earlier.

An X-ray of his pelvis revealed what appeared to be two dense foreign bodies in his urethra (Figure 1). Urethroscopy revealed two AAA size household batteries lodged in his bulbar urethra (Figure 2). The surrounding mucosa was very inflamed with areas of necrosis and a rusty appearance suggesting that these batteries had been present in the urethra for a significant period of time. These were successfully removed endoscopically with grasping forceps. Cystoscopy revealed inflamed-looking bladder mucosa consistent with repeated urinary tract infections.

The patient was catheterized postoperatively and discharged 48 hours later on a two-week course of broad spectrum antibiotics and successfully passed a trial without catheter two weeks later. On further questioning at discharge, the patient admitted to inserting three AAA sized batteries into his urethra for sexual gratification during masturbation four weeks earlier.

Discussion

An ever-increasing number of self-inflicted foreign bodies have been reported in the urethra and urinary bladder over the last decade especially in male patients. Literature in women is sparser. If one reviews the literature on this subject, it becomes clear that almost any conceivable object has been found in the urethra and the urinary bladder. The variety of these objects is impressive, including sharp and lacerating objects (needles, pencils, ball point pens, pen lids, garden wire, copper wire, speaker wire, safety pins, Allen keys), wire-like objects...
incidence appears to be higher in men (1.7:1) then women.\textsuperscript{13}

**Motivation for self-insertion of foreign bodies**

The most common reason for self-insertion of a foreign body into the male urethra is for auto-erotic and sexual gratification, especially during masturbation.\textsuperscript{2,14–16} In the vast majority of cases, the patients feel guilty and humiliated and, therefore, often delay asking for medical help.\textsuperscript{2} Other cases are associated with psychiatric disorders,\textsuperscript{2,14} drug intoxication,\textsuperscript{2,14} mental confusion,\textsuperscript{8} sexual curiosity,\textsuperscript{2,14–16} or a desire to get relief from urinary symptoms.\textsuperscript{7} Co-morbidities reported in patients presenting with foreign-body insertion include exotic impulses, most commonly sexual in nature, a disturbed schizoid personality and borderline personality disorder.\textsuperscript{16,17}

There are a few psychoanalytical theories postulated to account for self-insertion of devices for sexual gratification. Kenney’s theory states that the initiating event is an accidentally discovered pleasurable stimulation of the urethra, which is followed by repetition of this action using objects of unknown danger, driven by a particular psychological predisposition to sexual gratification.\textsuperscript{18}

Wise considered that urethral manipulation is a paraphilia combining sadomasochistic and fetishistic elements where the orgasm of the individual depends on the presence of the fetish. He believed it shows a regression to a urethral stage of eroticism due to a traumatic event or a strong libidinal drive.\textsuperscript{19} Some theories consider these acts as an indication of an impulsive behaviour which is self-punishing in nature and that may aggravate to suicide and hence many authors would advocate a psychiatric evaluation of all these patients.\textsuperscript{2} This may be controversial as many of these patients are psychologically normal.

Occasionally, foreign bodies are inadvertently inserted into a female urethra in an attempt to procure abortion or to prevent conception.\textsuperscript{20} Furthermore, thermometers have been known to slip into the female bladder during a patient’s attempt to determine the temperature in the vulva and urethra.\textsuperscript{21} Rarely, even living objects such as leeches have been introduced into the bladder.\textsuperscript{22}
Clinical findings

Symptoms of intravesical foreign bodies are usually those of acute cystitis including urinary frequency, dysuria, haematuria and strangury. Some patients present with swelling of the external genitalia, poor urinary stream, and urinary retention. Importantly, patients can also present with no or minimal symptoms. Mechanical urethritis and ascending genitourinary infections can arise after insertion of foreign bodies into the urethra either by men themselves or by their sexual partners in order to stimulate erection of the penis. Complications of intraurethral and intravesical foreign body include chronic and recurrent urinary tract infections, calcification, obstructive uropathy, scrotal gangrene, vesicovaginal fistula, squamous cell carcinoma and even death from sepsis. Some patients present with urethral tears and periurethral abscess or fistula, haemorrhage and urethral diverticula.

Signs that should raise the doctor’s suspicion include undue anxiety during sexual-history-taking or attempts to avoid genital or rectal examination. The diagnosis can frequently be made by clinical history and careful physical examination. Objects distal to the urogenital diaphragm can typically be palpated directly, while objects proximal to the diaphragm are not readily palpable. If the diagnosis is unclear radio-opaque foreign bodies can usually be seen on KUB radiographs. Intravenous urograms, cystograms and ultrasound imaging can successfully reveal radiolucent objects. Occasionally there is a role for computed tomography (CT) in the diagnosis of foreign urethral and intravesical objects. In all patients, radiological evaluation is necessary to determine the exact size, location and number of foreign bodies prior to planning therapeutic intervention. Definitive diagnosis and therapeutic intervention is usually carried out by means of endoscopy.

Management of these patients

The main objectives of treatment are to remove the foreign object, endoscopically if possible, avoid and treat complications, without compromising erectile function.

Immediate management of patients with foreign bodies consists of providing pain relief and control of voiding symptoms with either anticholinergic medications in case of irritative symptoms and bladder catheterization if the patient is having difficulty in voiding. Urinary tract infection and sepsis needs treatment with broad spectrum antibiotics.

Definitive management of foreign bodies aims at providing complete removal of the foreign body with minimal complications such as trauma to the urethra and bladder, peritonitis, urinary tract infection and haematuria among others. On occasions, foreign bodies may be spontaneously expelled during micturition. Most foreign bodies in the urethra and bladder may be removed endoscopically either completely or after fragmentation.

Depending on the type, size and location of the foreign object, various methods including meatotomy, cystoscopy, internal or external urethrotomy, suprapubic cystotomy, fogarty catheterization and injection of solvents have been used.

Grasping forceps, snares and retrieval baskets are routinely used, but over the past few decades, several modifications of endoscopic instruments have been developed for removing foreign bodies. Cylindrical foreign bodies and thermometers have been removed via the transurethral route using flexible and rigid cystoscopy even using nephrosopes transurethrally.

The most suitable method is dependent on the size and mobility of the object. Often it is necessary to push object back into the bladder before grasping and removing them.

Other investigators have used specially designed magnetic retrievers to remove metallic foreign bodies such as hair pins.

Paraffin and wax objects like candles and crayons are frequently found foreign intraurethral and intravesical objects. Previously, solvents such as xylol, benzene and even kerosene were used to try and dissolve these objects. However, since these solvents are now known to be carcinogenic, their use is no longer suitable. Endoscopic removal of wax and paraffin is further complicated as these substances tend to float on water. To counteract this, some investigators have used carbon dioxide insufflation cystoscopy of the bladder and removal.

Other investigators have used holmium: yttrium: aluminium: garnet (Ho-YAG) laser to cut foreign bodies like weed trimmer lines having pushed them into the bladder.
Others are using percutaneous instruments for removing longer and stiffer intravesical foreign bodies such as garden wire. Similar techniques have also been used to remove fragile foreign bodies such as a lidocaine carpule from the bladder. Metal wires introduced into the bladder usually get curled up as a result of bladder contractions. Occasionally it is possible to remove them endoscopically, however, in most cases open removal is necessary to try to minimize urethral trauma during endoscopic extraction. There are reports of using intravesical laparoscopy to facilitate removal of foreign bodies. One such report discussed the role of laparoscopy to untie a complete knot of electric wire before its removal.

The optimal technique to remove a foreign body should be decided after consideration of the size and nature of the object, associated urinary tract injuries and size as well as the patients’ condition.

In men, cases where endoscopic techniques are unsuitable or unsuccessful, open surgical removal is needed. For objects lodged in the penile urethra, external urethrotomy is recommended, while for intravesical foreign bodies, a suprapubic cystotomy is the procedure of choice.

Because of the easy access into the female bladder via the urethra, foreign bodies in the female bladder are usually readily removed endoscopically. Only sharp or large objects need open removal. Complications and adverse consequences are seldom reported in women with a late urethral stricture rate of around 5%.

Due to the high incidence of co-morbid psychiatric disease, mental retardation and dementia, it is recommended that these patients have routine psychiatric evaluation, although this is by no means universally accepted. This should hopefully reduce the risk of recurrence. Follow-up of patients with a history of intraurethral and bladder foreign bodies should be recommended, albeit difficult as a result of late manifestations such as urethral stricture disease.

Removal of intravesical foreign bodies from children, however, poses considerable challenges. The size of the paediatric urethra precludes safe endoscopic retrieval and open removal is the norm. Reddy and Daniel used carbon dioxide bladder insufflation cystoscopy and thereafter under vision introduced a 10 mm laparoscopic port suprapubically to remove blue tack from a bladder. Percutaneous techniques to retrieve objects using direct transurethral visualization have been reported in infants as young as 4 months in the literature.

Summary
The reporting of urethral and bladder foreign bodies is increasing, although uncommon. In patients presenting with chronic lower urinary tract symptoms, the presence of foreign bodies should be kept in mind. Radiological tests are necessary to determine the exact size, number and nature of the foreign object. The best method for removal of the foreign objects depends largely on their nature and location, patients’ size and age as well as surgical expertise and the available equipment. However, from the literature, it is evident that most foreign bodies can be retrieved using minimally-invasive endoscopic techniques. Open surgical removal is usually reserved for those in whom minimally-invasive techniques are unsuitable or have failed.

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