

## Recurrent Self-Insertion of a Urethral Foreign Body Requiring Medical Intervention: A Case Report

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### Abstract

Urethral foreign body obstruction is a rare clinical occurrence commonly associated with recurrent behaviors in males often seeking sexual pleasure. Although the literature is abundant on foreign body removal from the urethra, our case reports a non-typical approach to removing a tapered dilating device and minimizing complications in a patient with a repeat history of a surgically removed dilating devices from the urethra. Herein we present the case of a 57-year-old male who presented to us with penile pain secondary to an irretrievable foreign body.

**Keywords:** trauma, urethra, foreign body obstruction, urology, recurrent self-insertion

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### I. Introduction

Urethral dilation is the act of using dilators and stretchers to enlarge the lumen of the urethral. This act is done by men mainly for sexual stimulation. The goal is slow and gradual dilation of the urethra with increasing sizes of dilators which is reported as “pleasurable”. Eventually the urethra is dilated to the point where the prostate can be reached for further stimulation. Between 2010-2014 the national incidence of emergency room visits was 7.6 per 100,000 persons (1). Patient demographics reflect a higher prevalence of self-insertion of foreign bodies occurring in older Caucasian males with a median age of 40-49. (2).

While there is a high availability of literature on urethral sounding and removal of the foreign bodies from the urethra; the purpose of our case is to report a non-typical approach to remove the tapered dilating device and minimize complications in a patient with a history of previous medically removed dilating device from the urethra. In this case report, we describe the clinical scenario, evaluation, and surgical approach of the case with a review of relevant literature.

### Presentation of case

A 57-year-old male presented to the Emergency Department (ED) with penile pain secondary to an irretrievable foreign body placed, referred to as a “sound,” by himself for sexual gratification after consuming several glasses of wine. The device had been within the urethra for approximately two hours before arrival at the ED. At that time, he denied other symptoms, including penile swelling, pelvic pain, abdominal pain, or blood at the urethral meatus. This occurrence was the second episode of the patient having an irretrievable foreign body that required medical attention. In this current episode, the object initially had a string attached to be used for removal, which became dislodged. Due to the object’s length of 12 cm, depth into the urethra, and previous history of a foreign body requiring surgical removal, the removal of this urethral sound could not be completed transurethral. The patient required open suprapubic cystostomy for removal of the sound.

On entry into the operating room, the patient was alert, oriented, and in mild distress. He was placed on the operating table in the supine position and general anesthesia was administered. The patient was prepped by shaving the abdominal body hair and sterilizing the region with iodine solution from the umbilicus to mid-thighs, including the penis and scrotum. The urethral meatus was widely patulous, approximately 3 cm below the coronal sulcus. The urethral sound was palpated in the perineal area but not the penile urethra or anywhere

within the anterior urethra. The testicles were descended bilaterally in the scrotum and slightly atrophic. There was a previously healed Pfannenstiel incision approximately 10 cm in length noted.

A 15-inch blade was used to make a horizontal incision through the prior site, and the rectus fascia was opened. Allis clamps were placed on the cut edges of the rectus fascia. The rectus muscle was bluntly dissected from the underlying fascia. The midline was opened onto the perivesical tissue. The transversalis fascia was swept superiorly, and a 3 cm incision was made into the bladder. The silicone urethral object was identified and removed intact (figure #3). The foreign body was approximately 24 cm in length and 3 cm wide at the most distal portion. The bladder wall was closed in 3 layers. A 7 French Jackson-Pratt drain was placed in retropubic space. A 16 French Foley catheter was placed per urethra in the bladder with 10 mL of water in the balloon and remained for seven days. The patient was scheduled to be seen by the Psychiatry service.

## **II. Discussion**

Urethral foreign body insertion is an unusual and uncommon incidence that has increased in the literature over the past decade, predominantly in men. Most of these foreign bodies are self-inserted for various reasons, most commonly being inserted or applied for autoerotic, psychiatric, therapeutic, or for no specific reason.[3] A review of the literature reveals a diverse spectrum of object inserted into the urethra and the bladder, including hairpins, matches, electrical cables, rubber rings, and tubes. [4] These foreign bodies can sometimes migrate to the bladder, often being pushed further up the genitourinary tract to remove them or due to involuntary contraction of the perineal muscles. [3]

The most common motive associated with foreign bodies of the genitourinary tract is sexual or erotic, such as masturbation and other forms of sexual gratification or variations. [4] Kenney et al. theorized that the initiating event might be the unintentional discovery of pleasurable stimulation of the urethral mucosa, followed by the repetition of this action with objects of unknown danger, driven by a particular psychological predisposition to sexual gratification [4,5]

It is worth noting that often these patients harbor feelings of guilt and humiliation that may hinder seeking timely and appropriate medical care [4]. Due to the impulsiveness and regressive behavior and the association between self-instrumentation of the genitourinary tract and successful suicide act, some clinicians would advocate for a psychiatric evaluation of all patients who present with urethral foreign body insertion; however, as many of these patients will have a standard psychiatric evaluation the utility of said evaluation may be reviewed on a case-by-case basis. [4,6,7]

Clinically patients present with signs and symptoms of mechanical urethritis such as urinary frequency, dysuria, hematuria, and purulent urethral discharge due to foreign body insertion. Complications include Ascendant urinary tract infection, septicemia urinary retention, and urethral diverticula. [4] Foreign bodies lodged in the bladder may present with signs and symptoms of acute cystitis such as urinary frequency, dysuria, hematuria, and stranguria. However, it is essential to note that patients can present with no symptoms or only minimal discomfort. [4, 8]

Diagnosis of patients with foreign body insertion into the genitourinary tract can typically begin with a detailed history and physical. Objects distal to the urogenital diaphragm can typically be palpated directly, while objects proximal to the diaphragm are not readily palpable.[6] In all patients, to determine the exact size, number, and location of objects before intervention, radiologic evaluation is necessary. In most cases, pelvic imaging is successful; however, if KUB radiographs are not sufficient intravenous programs, cystograms and ultrasound imaging can successfully reveal radiolucent objects. [4,6,9] Management of these patients should be guided by the lodged object's location, size, and mobility. Initial management of these patients consists of optimizing pain control and voiding symptoms with either medication for irritative symptoms or bladder catheterization for voiding symptoms. Concurrent urinary tract infection or sepsis necessitate treatment with broad-spectrum antibiotics. [6,8]

Management of foreign bodies should aim to remove the lodged object altogether, prevent complications such as trauma to the urethra and bladder, peritonitis, urinary tract infection, and avoid compromise of erectile function. [4,6] Minimally invasive procedures such as endoscopic management to minimize bladder and urethral injuries are typically successful. In cases where endoscopic management is unsuccessful, open surgical removal is indicated. A suprapubic cystostomy is indicated for objects lodged in the penile urethra, external urethrotomy, and for objects lodged in the bladder. [6,7] Some clinicians have found success with the use of the Holmium: YAG laser in the removal of intravesical objects. [10]

### III. Conclusion

The rare and unusual incident of urethral foreign body insertion requires a multifactorial, systematic approach for treating and preventing recurrence. With imaging studies, the first step is often to identify the foreign body's size, shape, and exact location within the urethra. To reduce the risk of infection and further urethral injury, prompt removal is advised. The decision to perform an endoscopic vs. open bladder foreign body removal is based on the urethral site and mobility of the foreign body, the patient's presentation, and past medical and surgical history. Postoperative imaging can be performed to evaluate intraoperative trauma and bladder healing. Finally, the patient's psychosocial and psychiatric status should be addressed to minimize recurrence.

#### Conflict of Interest

The authors declare no conflicts of interest.

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#### Consent

Patient consent form has been obtained.

#### Author Contributions:

**Vanessa Aponte:** Validation, Investigation, Writing – Original Draft, Project administration. **Ardy R. Sowe:** Investigation, Data Curation, Writing – Original Draft, Visualization **Joshua Cabral:** Writing – Original Draft, Visualization. **Victory Eze:** Writing – Review & Editing, Visualization. Supervision. **Pamela W. Coleman:** Conceptualization, Methodology, Writing – Review & Editing, Supervision.



**Image 1.** Peri-operative image highlighting a suprapubic approach to extract to urethral sound



**Image 2:** Post-operative image after successful extraction of the 24cm long urethral sound

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