ABSTRACT

Introduction: Urethrovessical foreign bodies have been fairly reported. However, hitherto their diagnosis and subsequent management still pose challenge to clinicians. Different types of urethrovessical foreign bodies have been described. Broadly, they can be categorized as inserted, iatrogenic and migratory foreign objects. Regardless of their diversity, nature and origin, they do often lead to similar presenting symptoms and beset by multitude of complications. Case Series: We hereby report two cases: first, being self inserted wire into the male urethra and urinary bladder. Second case is a foreign body iatrogenically introduced into urinary bladder of a 52-year-old male during open prostate surgery. Conclusion: Patients with urethrovessical foreign bodies are highly susceptible to infections and other life threatening complications. Therefore, the use of broad spectrum antibiotics after culture and sensitivity studies coupled with safe removal of foreign bodies remains the mainstay of treatment. The precise modus operandi of retrieval always depends upon factors such as the type, size, shape and location of foreign object. Never the less, minimally invasive retrieval modalities are encouraged whenever deemed appropriately. Urethrovessical foreign bodies are frequently encountered in our clinical practice. It is therefore very essential to have high index of suspicion when reviewing patients with acute or chronic lower urinary symptoms.

Keywords: Iatrogenic foreign body, Urethra, Urinary bladder, Foreign body, Self-insertion

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doi:10.5348/ijcri-2012-09-171-CS-1

INTRODUCTION

Urinary bladder and urethra remain the main sites where foreign bodies often get stuck along the genitourinary system [1]. Urethrovessical foreign bodies are encountered in both male and female patients. However, they are more common in the latter group due to the presence of a short urethra.

Innumerable objects have been retrieved from the urethra and urinary bladder ranging from hairpin to a toothbrush [1–7]. Presence of a foreign body in the urinary bladder or urethra is a urologic emergency and should always be treated as such.

Late presentation may be fraught with undesired sequelae such as urinary bladder stone formation,
diverticulum, urethral stricture, and erectile dysfunction.

Two cases are presented herein, first being a 34-year-old male paraphiliac who inserted flex electrical wire into his own urethra and urinary bladder for auto-erotic stimulation purposes. Second case is a foreign body iatrogenically introduced into urinary bladder of a 52-year-old male during open prostate surgery. After few days the foreign body sluggishly migrated towards the meatal opening.

Our case series are primarily intended to document atypical presentation of urethrovessical foreign bodies and concurrently reminds clinicians to consider foreign body as a differential diagnosis when evaluating patients with lower urinary tract symptoms.

**CASE REPORT**

**Case 1**

A 34-year-old male who was referred to our hospital with one day history of dysuria, suprapubic pain and dribbling of blood tinged urine. Patient reported that these symptoms had followed self insertion of electrical wire into his own urethra for purpose of achieving sexual ecstasy.

Patient gave no history of associated fevers or chills. He also gave no history of having been admitted or treated for mental illness prior to this incidence. He does not smoke or use tobacco in any form; neither does he take alcohol or use any drugs for pleasure. Patient is single and peasant famer by occupation and gave no history of previous surgery.

Patient attempted to remove the wire several times with no success and in the process the inserted wire was pushed even deeper. (It is worth noting that this piece of information was obtained after repeated and protracted conversions with the patient who initially seemed not willing to readily divulge any information).

On examination, major findings were on local examination however on general examination we saw a young man, in good nutritional status, afebrile, not pale, well oriented but looked worried and rather anxious.

Local perineum and genitalia examination revealed few drops of blood stained urine per urethral meatus, but no visible foreign body noted. Also there was no any sign suggestive of genital trauma. However, unusual object could be palpated around the penoscrotal junction.

Per abdominal examination revealed no bladder distention but he had obvious mild suprapubic tenderness. The rest of systemic examination was essentially normal.

Patient had baseline investigations done which included urinalysis and full blood count. The former showed plenty of red blood cells but no pus cells, where as the latter was normal.

The most informative investigation was the pelvic radiograph anterior-posterior view which showed a long coiled up radio-opaque shadow extending along the entire urethra to the urinary bladder region (Figure 1). This confirmed the presence of urethrovessical foreign body.

Considering the pelvic radiograph findings patient was planned for suprapubic cystotomy to remove the foreign body. A long white flex electrical insulated wire with a complex knot was successfully extracted. The wire was 164 cm long when fully stretched (Figure 2). His postoperative period and serial follow up visits one year later was uneventful.

**Case 2**

A 52-year-old male, who presented to our centre with three hours history of protruding foreign body per urethral opening. Patient’s medical records and reports suggested that three weeks earlier he had undergone open prostatectomy.
He reported that he had fairly uneventful postoperative period and was discharged home ten days later. He had no catheter at time of discharge.

Nine days after discharge, he developed acute urine retentation which necessitated suprapubic puncture and catheterization. There after he was referred to our hospital. However, before his arrival to our centre, he started experiencing migratory excruciating urethral pain which was associated with burning sensation and an intense urge to void.

Initially pain was more marked around the root of the penis and later kept on migrating towards the anterior urethra. Two days later, he was shocked to note a white plastic object protruding per his urethral opening (Figure 3).

On examination, we saw a middle aged man, anxious, well oriented, afebrile, not pale, and had no pedal oedema. Local examination of the genitalia revealed a conical shaped plastic object protruding per urethral meatus, otherwise normal genitalia.

Per abdomen, he had an indwelling suprapubic catheter, with midline sub umbilical incisional scar. Urinary bladder was not distended. The rest of abdominal examination was normal and the other systemic examination was unremarkable.

Laboratory work up revealed mild elevation of blood urea and creatine. Urinalysis revealed many pus cells with insignificant bacterial growth.

Patient was prepared for emergency surgery whereby simple meatotomy was performed and the foreign body was easily removed out (Figure 4).

The foreign body turned out to be a cap of 60 mL irrigation syringe which was inadvertently forgotten inside the urinary bladder during open prostatectomy. The syringe cap gradually migrated towards the anterior urethra.

It was conical shaped with wider base diameter than the apex, a factor that may have prevented spontaneous expulsion and instead got stuck in the meatus (Figure 5). Patient had quick and uneventful recovery. Follow up visits, two years later revealed no urethral or meatal stricture.

**DISCUSSION**

Foreign bodies may get access to the urethra and urinary bladder either from deliberate act of self insertion, so as to attain sexual gratification or iatrogenically introduced into lower urinary tract during various therapeutic manoeuvres [1–5].

Seldom, urethrovessical foreign bodies have been reported to have migrated from contiguous structures [6]. Other factors that may prompt patients to inserts foreign bodies into their own genitourinary tracts include psychiatric disorders, senility, intoxication and occasionally curiosity in minors [4, 5].

A myriad of objects have been retrieved from the urethra and urinary bladder. Such foreign objects include safety pins, pocket battery, pencil and drinking straws just to mention a few [1–7].
In such scenarios management goals include, attaining correct diagnosis, preventing complications and safe extraction of a foreign body. Usually patient’s clinical presentation differ, however majority may present with hematuria, urethritis, cystitis and urinary retention [4].

Thorough history taking, physical examination coupled with appropriate investigations often leads to correct diagnosis. Occasionally obtaining a correct history from paraphilia, minors, drug abusers and mentally disturbed individuals may be difficult. Patience and high index of suspicion is therefore required.

Investigations selection more often hinges on patient’s presentation and clinician discretion. Investigations are usually specifically tailored and made appropriate to the case at hand. However, apart from hematological and biochemical work up more specific radiological investigations such as plain X-rays, ultrasonography, intravenous urogram, urethrogram and cystogram may be employed [3, 4].

While plain X-rays are useful to delineate radiopaque objects, the rest are useful in case of radiolucent foreign bodies. When available, cystoscopy can be used for both diagnostic and therapeutic purposes.

Definitive treatment goal is removal of the foreign body with no or minimal trauma. By far there is no widely acceptable treatment algorithm with regards to the presence of foreign bodies in the lower urinary tract.

Usually, decision regarding the best treatment depends on a number of factors such as patient’s condition, the foreign body’s shape, size, location and associated complications like encrustation and stone formation.

In most cases, transurethral cystoscopic removal is considered ideal, usually utilizing endoscopic forceps, snares, ballon-wires and stone-retrieving baskets. Large foreign bodies may be removed by suprapubic cystotomy in case endoscopic attempt is futile or no scopes available. Laparoscopic extraction is also becoming popular in some centers. Sometimes combined approaches may be required depending on circumstances [2–5].

In case of paraphilia, mentally unsound individuals and minors, a holistic approach is a prerequisite.

Thus, therefore a psychiatrist or medical psychologist should always be part of the multidisciplinary treatment team.

CONCLUSION

Urethrovical foreign bodies are fairly common. Their diagnosis and subsequent management may be challenging due to multifaceted clinical presentation and diversity of objects that are incriminated. It is imperative therefore to always consider foreign body as a differential diagnosis when evaluating patients with acute or chronic lower urinary tract symptoms.

Author Contributions
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George Lodewijk Pape – Acquisition of data, Drafting the article, Final approval of the version to be published
Fauzia Ay Tubu Masumai – Conception and design, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor
The corresponding author is the guarantor of submission.

Conflict of Interest
Authors declare no conflict of interest.

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