Multiple Impacted Urethral Metallic Needles and Screws (Foreign Bodies) Associated with Polyembolokoilamania

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Abstract This study aims to present the challenges faced in the management of multiple impacted foreign bodies, needles, and screws from the penile and bulbar urethra. A young man presented with complaint of a hard perineal swelling and passage of metallic nails per urethra. Pelvic radiograph revealed multiple foreign bodies (nails) in the penile and bulbar urethra. Successful cystoscopic removal of 11 foreign bodies comprising four large metallic screws and seven nail-like large sewing needles was done in two sessions. The most prevalent motivation for self-insertion of urethral foreign bodies is autoerotism/psychological impairment. Appropriate surgical technique guided by physical examination/ imaging with endoscopic removal is often successful, depending on the object's physical attributes and morphology while minimizing urothelial trauma and preserving voiding and erectile function. Follow-up cystourethroscopy is important for diagnosing any complications and urothelial injuries.

Keywords Urethral foreign body · Urethral injury · Autoerotism · Polyembolokoilamania

Introduction

Urethral foreign bodies are rare with most of cases reported being self-inflicted [1–3] and some due to iatrogenic injuries

[3] or migration from adjacent sites. In cases of self-inserted foreign bodies, the etiology includes psychological problems, autoerotism [4], iatrogenic, self-insertion of foreign bodies in the urethra and polyembolokoilamania (broad group of disorders characterized by self-insertion of objects into body orifices). The presentation of such patients is usually delayed with most presenting with hematuria, dysuria, urinary frequency, strangury, and urinary retention [3, 5]. Consequences such as fulminant sepsis and death may ensue with such behavior in the event of delayed medical intervention [2]. Despite available literature on self-inserted urethral foreign bodies, this case warrants attention given the challenge faced in removing multiple impacted sharp foreign bodies like needles and screws from the penile and bulbar urethra without any significant obstructive symptoms.

Case History

A 36-year-old unmarried man presented to our outpatient clinic with complaints of a hard perineal swelling and passage of metallic nails per urethra for the last 1 year without any significant urinary complaints. There was no history of psychiatric disorders. On perineal examination, multiple hard foreign bodies were palpable in penile and bulbar urethra. Pelvic radiograph confirmed the diagnosis and position of multiple foreign bodies (nails) in the penile and bulbar urethra (Fig. 1). Psychiatric evaluation of the patient revealed polyembolokoilamania associated with autoerotism, and psychiatric counselling and follow-up in psychiatry were advised. After obtaining informed patient consent for urethrocystoscopic removal of multiple foreign bodies under local anesthesia, cystourethroscopy revealed a highly inflamed bladder mucosa with areas of necrosis and rusty appearance of the screws and nails embedded in the urethra suggesting that they had been impacted for a significant

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Fig. 1 Plane X-ray pelvic radiograph showing the multiple radiopaque densities in the perineal region suggestive of urethral foreign bodies

period of time. Successful urethrocystoscopic removal of 11 foreign bodies comprising four large metallic screws and seven nail-like large sewing needles (Fig. 2) was done, under endoscopic vision (Fig. 3) and fluoroscopic guidance in two sessions using a stent removal forceps/cystolithotrite while taking utmost care not to cause additional trauma to urethra by keeping alignment/grasping of foreign bodies parallel to urethra as far as possible. As we did the procedure under endoscopic and fluoroscopic guidance, we were able to reliably ascertain the position of these foreign bodies. Patient was catheterized with a silicone Foley's catheter for 10 days. On 6-month follow-up, the patient had normal voiding and erectile function. Currently, the patient is doing well and is under the follow-up care of the psychiatrist and the surgeon.

Discussion

A review of current literature reveals that various self-inserted foreign bodies in the urethra have been described ranging from needles, pencils, ball pens, pen lids, safety pins,

Fig. 2 External view of the multiple (ten) metallic needles/screws retrieved endoscopically from the same patient successfully

Fig. 3 Endoscopic/cystoscopic view of the multiple metallic bodies seen in the urethra

toothbrushes to gloves, intrauterine contraceptive devices, tampons, and pessaries [6]. Aliabadi et al. [4] reported 18 patients, citing self-instrumentation of foreign bodies in the urethra with autoeroticism in six (33 %), overt psychiatric illness in two (11 %), as an aid to voiding in seven (39 %) patients as the possible etiology of urethral foreign bodies, while no definite reason could be ascertained in three (17 %).

Presentation of patient with urethral foreign body may vary from asymptomatic to symptoms of hematuria, dysuria, urinary frequency, strangury, urinary retention, pelvic pain, and penile swelling [3, 5]. Most cases have a delayed presentation owing to embarrassment due to failed multiple self-removal attempts that risk urethral injury and migration of the foreign body [6]. Diagnosis is often confirmed by physical examination as foreign bodies distal to urogenital diaphragm are generally palpable. Pelvic radiographs/CT scan can define a foreign body's position, orientation, and relationship to the surrounding structures. Foreign body retrieval depends on the morphology, size, and orientation in the urethra which needs to be tailored to minimize urethral trauma with the aim of preserving voiding and erectile function. Urethrocystoscopic extraction of most urethral foreign bodies with help of forceps, snares, and/or baskets is generally successful. At times, more invasive procedures like external urethrotomy for pendulous urethral foreign bodies and suprapubic cystostomy for posterior urethral foreign bodies or meatotomy [6] may be necessary. Following removal of urethral foreign bodies, complications like infection, fistula, urethral stricture, diverticulum, and incontinence may occur with urethral strictures being reported as one of the most common delayed complications of impacted urethral foreign bodies with an average incidence of up to 5 % [6]. The most common cause of polyembolokoilomania in the urethra appears to be autoerotism [5] followed by mental and cognitive, factitious, and personality disorders; sexual curiosity; and abuse of drugs/intoxicating substances; rarely, accidental and iatrogenic [7] foreign bodies may be also responsible. To the best of our knowledge, one report [8] of multiple foreign bodies in the urethra has been published to date.

Conclusion

The present case highlights the management of a rare clinical condition in which psychological and urological assessment is mandatory. Foreign body retrieval is determined by its physical attributes and morphology with the aim to minimize urothelial trauma and preserve erectile function. Cystourethroscopy is important to diagnose urothelial injuries and to ensure complete removal of foreign bodies following extraction. Apart from foreign body endoscopic extraction, regular follow-up and a comprehensive view of the underlying condition/psychosocial issues should be taken into consideration to prevent recurrence, urethral trauma, and chances of infection and to maintain erectile function.

Conflict of Interest None.

Source(s) of Support None.

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