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AN UNUSUAL URETHRAL FOREIGN BODY

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Urethra, Urinary Bladder, Foreign bodies, Endoscopy, Cystoscopy.

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ABSTRACT

INTRODUCTION: Lower urinary tract foreign body insertions have a low incidence. The motives for insertion of a variety of objects are difficult to comprehend. This case warrants discussion given the great management challenge faced by the oddity and infrequency with which a fork is encountered in the penile urethra.

PRESENTATION OF CASE: A 70-year-old man presents to the Emergency Department with a bleeding urethral meatus following self-insertion of a fork into the urethra to achieve sexual gratification. Multiple retrieval methods were contemplated with success achieved via forceps traction and copious lubrication.

DISCUSSION: The presentation of urethral foreign bodies can vary widely, as can the type of object inserted. The most prevalent motivation for self-insertion of urethral foreign bodies is autoerotism. Motivations ought to be explored in light of possible underlying psychological or psychiatric conditions. The most appropriate surgical extraction technique can be guided by physical examination and imaging. Endoscopic removal is often successful, depending on the object's physical attributes and morphology. It is important to arrange appropriate follow-up, as late complications can occur such as urethral strictures.

CONCLUSION: Psychological and surgical arms encompass the management plan. Foreign body retrieval is determined by its physical attributes and morphology with the aim to minimise urothelial trauma and preserve erectile function. Essentially, endourological extraction serves the primary means of retrieval. Cystourethrosopy is important to diagnose urothelial injuries and to ensure complete removal of foreign bodies following extraction.

INTRODUCTION:

Self-inserted male urethral foreign bodies are rare emergencies that urological and general surgeons may face. Urethral foreign body insertions are an unusual practice in which any imaginable object is known to be implicated. In a series of 20 adult cases over 9 years, foreign body insertions into the lower urinary tract have a low incidence, with males 1.7 times more likely to commit the act than females¹. The mean age of individuals is 35.8 +/- 20.0 years¹.

The practice manifests primarily during states of pathological masturbation, substance abuse and intoxication and as a result of psychological compounders². Autoerotic stimulation with the aid of self-inserted urethral foreign bodies has been existent since time immemorial and have presented an unusual but known presentation to Urologists^{2,3}. The presentation is however delayed owing to the fundamental emotion of embarrassment. Of those who seek medical attention, haematuria, dysuria, urinary frequency, strangury and urinary retention are the most common presenting features¹⁻⁴. Dire consequences such as fulminant sepsis and death ensue such behaviour in the event of delayed medical encounter².

Despite the available literature on self-inserted urethral foreign bodies; the case we here-in describe of a penile urethral fork is a rarity^{5,6}. We describe the clinical presentation, evaluation and management; followed by a review of the literature.

PRESENTATION OF CASE:

A 70-year-old man presented to the Emergency Department with macroscopic haematuria but no other urinary symptoms. Detailed history taking revealed he had self-inserted a 10cm steel dining fork into his urethra 12 hours prior, for autoerotic

stimulation. There was no formal history of psychiatric disorders; however the patient had had previous Morgarella urinary tract infection, and concurrent prostatic carcinoma for which he declined radical treatment and had opted for watchful waiting. On examination, the fork was not visible, but palpable within the penile urethra.

Pelvic radiography and computerised tomography confirmed the position of the fork, within a non-perforated pendulous and bulbar urethra, with the handle oriented proximally (Figure 1 and 2).

Extraction of the foreign body via the urethral meatus was successful under general anaesthesia, with the aide of lignocaine gel and Rampley forceps (Figure 3). An open excision was not required. Urethrocystoscopy identified mucosal abrasions in the pendulous and bulbar urethra. A urethral catheter was not placed. The patient voided well and went home post-procedure.

DISCUSSION:

If one reviews current literature, it is apparent that the human mind is uninhibited let alone creative. The wide array of self-inserted foreign bodies include needles, pencils, ball point pens, pen lids, garden wire, copper wire, speaker wire, safety pins, Allen keys), wire-like objects (telephone cables, rubber tubes, feeding tubes, straws, string), toothbrushes, household batteries, light bulbs, marbles, cotton tip swabs, plastic cups, thermometers, plants and vegetables (carrot, cucumber, beans, hay, bamboo sticks, grass leaves), parts of animals (leeches, squirrel tail, snakes, bones), toys, pieces of latex gloves, blue tack, Intrauterine Contraceptive Devices (IUCD), tampons, pessaries, powders (cocaine), fluids (glue, hot wax)^{1,2}.

In the literature, the clinical presentation of a penile urethral foreign body is varied – ranging from asymptomatic to lower abdominal or penile pain, swelling of glans or body of penis, dysuria, dyspareunia, microscopic or macro-haematuria, pyuria, urinary frequency, strangury, urinary retention and fever. The latter six are the most common presenting features^{1-4,7}. A delayed presentation is common owing to embarrassment and invariably follows multiple removal attempts, which risk urethral injury and foreign body migration^{2,7,8}.

Diagnosis is most often confirmed on physical examination. Foreign bodies distal to the urogenital diaphragm are readily palpable. A pelvic X-ray and computerised tomography of the abdomen and/or pelvis can be useful in defining a foreign body's position, orientation, relationship and its ramification to surrounding viscera².

Foreign body retrieval is determined by its physical attributes and morphology with the aim to minimise urothelial trauma and preserve erectile function. With the infrequency in which a fork is encountered, there lacks sufficient information to evaluate and compare varying treatment modalities. Foreign bodies located distal to the urogenital diaphragm can often be successfully extracted by endoscopic methods with the aide of forceps, snares, and baskets, and as such have become the standard of care^{1,2}. Following removal, cystourethrosopy is important to diagnose urothelial injuries and to ensure complete removal of foreign bodies. Antibiotic cover is advised³.

Occasionally, more invasive foreign body extraction procedures are required – external urethrotomy (for pendulous urethral foreign bodies), suprapubic cystotomy (for posterior urethral foreign bodies), or meatotomy^{1,7,9}. Complications following the former procedures are rare but can include infection, fistula, urethral stricture,

diverticulum, and incontinence^{1,2,4,9}. Of these, urethral strictures - 5% incidence - are the most common delayed complication¹. Thus, appropriate follow-up is essential to monitor the development of complications.

The motive of the presentation should be examined, as association with other medical or psychosocial issues may exist and thus require further management. Selected psychoanalytical theories have been put forth and are formed on the basis of paraphilia with sado-maso-fetishistic, impulsive and manic rudiments - Kenney's theory of impulsivity, Wise's sado-maso-fetishistic theory and Dr. Poulet's manic masturbation hypothesis². Moreover, the validation for such conduct should be elucidated to thwart future recurrences⁷. The most prevalent motivation for self-insertion of urethral foreign bodies is autoerotism^{2-4,6,7,10}. The latter is exemplified in a retrospective analysis by Reider et al, in which 8 of 13 (61%) individuals investigated, self-inserted secondary to autoerotism⁴. Some cases are associated with mental and cognitive disorders, factitious disorders, personality disorders, sexual curiosity and practice under the influence of intoxicating substances^{2,4,10}. Accidental and iatrogenic foreign bodies occur much more rarely^{3,4,10}.

CONCLUSION:

This case highlights several important management principles when faced with such a rare urological emergency. Foreign body extraction is guided by its morphology and position, and can often be successfully achieved endoscopically. However, a more wholistic approach to management is crucial, which includes not only the prevention of infection, minimisation of further urethral injury, assessment and documentation of more sinister underlying injury, and monitoring of delayed complications; but also,

thorough evaluation of motivation and psychosocial issues, which in itself requires attention and may prevent future episodes.

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CONSENT:

Written informed consent was obtained from the patient for publication of this case report and its accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request

Author Contributions

Krishanth Naidu was the major contributor in writing the case report and he was involved in the acquisition, analysis and interpretation of the data. Maurice Mulcahy and Amanda Chung provided clinical care of the patient during his treatment and supervised the writing of the case report and were involved in the review and preparation of the manuscript.

Image and figures were courtesy of the Department of Radiology and medical team, with patient consent.

All authors read and approved the final manuscript with Maurice Mulcahy giving the final approval of the manuscript for submission.

APPENDIX AND REFERENCES:

Figure 1: Pelvic X-ray depicting radio-opaque foreign body (fork) within penis.

Figure 2: Preoperative photograph of penile deformity due to urethral foreign body.

Figure 3: Intraoperative photograph showing extraction of a fork per urethra using Rampley forceps.

1. Mannan A, Anwar S, Qayyum A, Tasneem RA. Foreign bodies in the urinary bladder and their management: a Pakistani experience. *Singapore Medical Journal*. 2011; 52(1):24-8
2. Bedi N, El-Husseiny T, Buchholz N, Masood J. 'Putting lead in your pencil': self-insertion of an unusual urethral foreign body for sexual gratification. *Journal of the Royal Society of Medicine Short Reports*. 2010; 1:18
3. Rieder J, Brusky J, Tran V, Stern K, Aboseif S. Review of Intentionally Self-

Inflicted, Accidental and Iatrogenic Foreign Objects in the Genitourinary Tract. *Urologia Internationalis*. 2010; 84:471-5.

4. Moon SJ, Kim DH, Chung JH et al. Unusual Foreign Bodies in the Urinary Bladder and Urethra Due to Autoerotism. *International Neurourology Journal* 2010; 14:186-9

5. Saito G, Abe T, Unoura A. Urethral foreign body fork: in a man inserted by himself in order to dilate his urethra: A case report. *Nishinihon Journal of Urology*. 2005; 67(9):559-1

6. Stravodimos KG, Koritsiadis G, Koutalellis G. Electrical wire as a foreign body in the male urethra: a case report. *Journal of Medical Case Reports* 2009; 3:49

7. Mitterberger M, Peschel R, Frauscher F, Pinggera GM. Allen key completely in male urethra: a case report. *Cases Journal*. 2009, 2:7408

8. Ghaly AFF, Munishankar AR, Sultana SR, Nimmo M. Case report: Foreign body in the male penile urethra. *Genitourinary Medicine*. 1996; 72:67-8

9. Poole-Wilson DS. Proceedings of the Royal Society of Medicine: Section of Urology - Discussion on Urethral Injuries. 1956; 49:685-910.

10. Unruh BT, Nejad SH, Stern TW, Stern TA. Insertion of Foreign Bodies (polyembolokoilamania): Underpinnings and Management Strategies. *The Primary Care Companion for CNS Disorders*. 2012; 14:1







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