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Vesico-urethral foreign body: A case report

[1] Aziz Iqbal, [*2] Dr. Albina

[1] Professor, Department of Jarahat, Ajmal Khan Tibbya College & Hospital, Aligarh Muslim University, Aligarh, Uttar Pradesh, India
[2] Assistant Professor, Department of Jarahat, Takmil-ut-Tib College & Hospital, Lucknow University, Lucknow, Uttar Pradesh, India

Abstract
Foreign bodies in genitourinary tract are fairly uncommon. The variety of foreign bodies inserted into or externally attached to the genitourinary tract includes all type of objects. Several reports are published which indicate that the object was sexual or autoerotic. In adults, this is most commonly caused by the insertion of objects used for masturbation and is frequently associated with mental health disorders. We Report a case of a 14 year-old boy presented in our Out Patient Department with the complaints of haemeturia and incontinence of urine, He inserted a PVC cable into the urethra and it was removed by suprapubic cystostomy. Our case highlights the importance of good history, clinical examination, relevant investigation and simple measures to solve the problem.

Keywords: foreign body, urethra, PVC wire, supre-pubic cystostomy

1. Introduction
Introduction of various objects into genitourinary tract is fairly uncommon. Many different types of foreign bodies [FB] have been identified in the urinary bladder and urethra like metallic objects, electric wire, pocket battery, telephone cable, little fish, needle, bullet, safety pin, animal feather, pieces of candle, thermometer, chewing gum, gauze pack, tooth brush, metal hook, retained foley's bulb, small twig of soft plant, a scalpel blade and displaced 'Cu-T' etc has been reported in the literature [1-7]. Usually these FB's are self inserted for autoeroticism, inquisitiveness, miscarriage, psychiatric illness, senility or alcoholism [8-10]. Sometimes FB's such as intrauterine devices migrate to the bladder from adjacent organs [11].
There have been some case reports of electric wire cables inserted into the male urethra and bladder [12-20]. The most common complaints due to FB in urinary tract are dysuria, increased frequency of micturition, difficulty in micturition and haemeturia.
The presence of foreign bodies in genitourinary tract predisposes to recurrent infections, calculus formation, bladder outlet obstruction and renal failure [21].
There are several methods of extraction, with the development of minimally invasive techniques, in most cases intravesical foreign bodies can be removed endoscopically without resorting to open surgery [22]. However in some cases open surgery becomes necessary.
Here we report a case of self introduction of a PVC (Poly Vinyl Chloride) coated wire, which coiled in the bladder, extraction via urethra was not possible so it was removed by suprapubic cystostomy.

2. Case Report
A 14 year old boy presented with history of urethral bleeding with pain in urethra and suprapubic region for one week after having introduced a Poly Vinyl Chloride (PVC) coated electric wire in his urethra, He tried to pull it hard but he was unable to retrieve it outside. This was followed by bleeding from urethra and soon he became incontinent. With these complaints he consulted in our surgery Out Patient Department. Examination revealed a PVC cable wire with one end protruding about 12 inches out of meatus (Figure 1). Our initial attempts to remove the wire failed, then an X-Ray pelvis was done, which revealed a smooth and coiled string in the urinary bladder and urethra. Plenty of local anaesthetic gel was used but the PVC wire could not be pulled out due to the knot inside the urinary bladder. At this point, no further traction was given and the patient was prepared for surgery. Complete removal of PVC cable wire was performed from suprapubic cystostomy. There was no phosphatic encrustation or deposits of blood on it. Bladder inspection did not reveal a vesical calculus. The patient tolerated the surgery well and his post-operative period was uneventful. He was discharged on second post-operative day in satisfactory conditions. There was no history of previous bladder surgery. Patient's behavior gave no indication of possibly undiagnosed psychiatric condition or that autoerotic stimulation was intended. Patient was called in follow up after one week and his prognosis was good and he was suggested for psychiatric consultation but the boy failed to return for his follow up visit.

3. Discussion
Urinary bladder is the commonest site of FBs in the urinary tract. Presence of FBs in the urinary bladder has always been interesting topic. Every urologist occasionally comes across such patients in his practice. If this condition is neglected, it can lead to complications and the primary goal is extraction of a FB and preservation of urinary tract function (Urinary voiding and erectile function), using different techniques [23, 24].

The types of FB have been classified as inserted, migratory and iatrogenic [25]. When the motive of self-insertion is autoerotic stimulation or psychiatric illness, the items or objects which patients use may be electric wire, safety pin, hair clips, battery, leech, hair balls and even fish have been discovered [26]. In case of iatrogenic insertion, surgical gauze, pieces of foley's catheter, Teflon beak of resectoscope sheath and migrated intrauterine contraceptive devices were found [26]. According to Aliabadi *et al*. [27] most patients are too ashamed to admit that they have inserted and objects for auto erotic, Psychiatric, Therapeutic, or any other reseasons. Acoording to Van Ophoven and Dekervion [28] the most common motive associated with the insertion of foreign bodies into genitourinary tract is sexual or erotic in nature. In adults, they opive that it is commonly caused by insertion of objects used for masturbation, which is usually associated with mental health disorder, such patients are also known to be prone to genital self emasculation injuries [29] so need to be identified and have psychiatric assessment. Our patient refused this and did not volunteer a reasonable history to enable a fair assertion. That is not usual as according to Aliabadi *et al*. [27].

The patients with FB in urinary bladder usually present with urethritis, cystitis, recurrent UTI. Haemeturia and urinary retention [30]. It may complicate into calculus formation, bladder outlet obstruction, all of which may lead to renal impairment. The symptoms of intravesical foreign body are remarkably constant and are usually as a result of urinary bladder irritation, when foreign body is large, it reduces the bladder capacity. Haemeturia may occur from trauma due to self manipulation or rough objects that injure the bladder wall. These symptoms are most commonly irritative but may also be obstructive, if there is an extension of foreign body into the urethra [31] and this is usually accompanied by copious bloody discharge, suprapubic pain, waste pain and fever may occur in long standing cases. A wide variety of complications may follow the presence of foreign bodies in the urinary bladder. Foreign bodies in the urinary tract increase the risk of urinary tract infection [32].

Such infections are often recurrent as a result of bacteria persistence within or the foreign bodies or sometimes as a result of poor drainage. The risk of end-toxemia should always be born in mind in the process of extraction of foreign body. Complications such as calculus formation have been widely reported in association with migrated intrauterine contraceptive devices and surgical needles [33-35].

When a wire is introduced through urethra, part of it remains in the urethra and part goes into the bladder cavity. To avoid embaressment, patient tend to seek treatment late, often waiting until the problem becomes symptomic [7]. The patients with the developed symptoms or complications. Presence of foreign bodies in the urinary tract predisposes to infections, calculus formation and bladder outlet obstruction, all of which lead to renal impairment. Urethral foreign bodies may lead to severe complications including penile necrosis and urosepsis [36]. No post operative complications after removal of intravesical electrical wire cables have been reported in the literature. Life threatening complications of intravesical foreign bodies are rare but do occur. Ito *et al*. [37] reported in 2009 a case if intravesical foreign body with vesical rupture and peritoneal invasion, severe infection and obstruction may lead to renal insufficiency [38].Whereas urethral injury during insertion or self-extraction may predispose to urethral stricture formation.

Radiologic images are next only to a high index of suspicion in the evaluation of patients with intravesical foreign bodies. The extent and modality required depends on the type of foreign body and the presence of complication.

Radiologic evaluation is necessary to determine the exact size number and nature of foreign body. Ultrasonography is usually able to localize the foreign body to the bladder and determine the exact size and number but is unable to evaluate the exact nature. Plain abdominal X-Ray is, however, able to classify the object into rediopaque and radiolucent and therefore to a large extent determine their nature e.g. radiopaque metals. In the presence of bladder perforation, computed tomographic cystography is a reliable diagnostic tool where enhancement of bladder contents is necessary [39], Cystoscopy confirms the diagnosis, and some foreign bodies are successfully removed during the process [40] X-Rays are sufficient to diagnose such conditions. Intravenous urography rarely gives any additional information, and it is indicated only to diagnose radiolucent objects.

There are several methods of extraction of Vesico-urethral foreign bodies. In most cases endoscopic method is used [41], However, there are reports where percutaneous and even open surgery was needed to successfully extract the object. Foreign body in the urinary bladder represents a urologic challenge that requires prompt management and should be treated as emergencies. The wide variety of technique for removal of intravesical foreign bodies indicates the ingenuity with which urologists have approached the subject. Broadly, these are classified into endoscopic and open surgical approaches. The methods used usually depending on the nature and size of objects and the available expertise and equipments [42]. Endoscopic and minimally invasive techniques should be encouraged. However in many cases, management can not be endoscopic and it is necessary to use the classical method.

Sometimes the object is too large to extract with minimally invasive techniques. In those cases, fragmentation is attempted (Via Laser or using endoscopic instruments) to retrieve the object piece by piece, but sometimes open surgery is required [43]. In some cases, cystoscopy and cystostomy were used in combination to remove the objects too large to retrieve through the urethra and too solid to fragment them [44].

Sometimes, open surgery is required because the foreign body is too large or its nature this imperative and this may also be done when the manpower or equipment is not available. In this case due to the knot at coiled PVC wire in the bladder, pulling by distal end was not possible. Due to the fact that diameter of PVC wire was 5-8 mm, introduction of any endoscopical instrument was considered impossible at this point, no further mobilization was possible and the PVC wire had to be removed by open surgery.

Although the use of foreign objects for sexual gratification is a rare condition, foreign bodies can be self inserted for masturbation, frequently in patients with psychiatric disorders. Examination of urinary bladder and urethra is very important in psychiatric patients with urinary symptoms and pelvic pain. Therefore all cases must be sent for psychiatric counseling.

Psychiatric evaluation and treatment are necessary to obviate repeated cases. In our case we did not find any psychiatric cause and the patient did not admit anything behind the cause of insertion of PVC wire into the urethra. We advised him to consult the psychiatrist but we lost him in follow up.

4. Conclusion

The presence of foreign body in the urinary bladder and urethra is rare and exceptional and therefore requires a high index of suspicion for diagnosis. In differential diagnosis of unknown haemeturia, one should always consider a FB, even when the patient denies the self insertion size. A radiological evaluation is necessary to determine the exact size, location and number of foreign bodies. Although foreign bodies are currently removed endoscopically, in some cases open surgery can not be avoided, Removal of foreign bodies in the urogenital system should follow the rules of basic surgical practice. Where an underlying psychological abnormality is suspected, psychiatric assessment should be carried out.

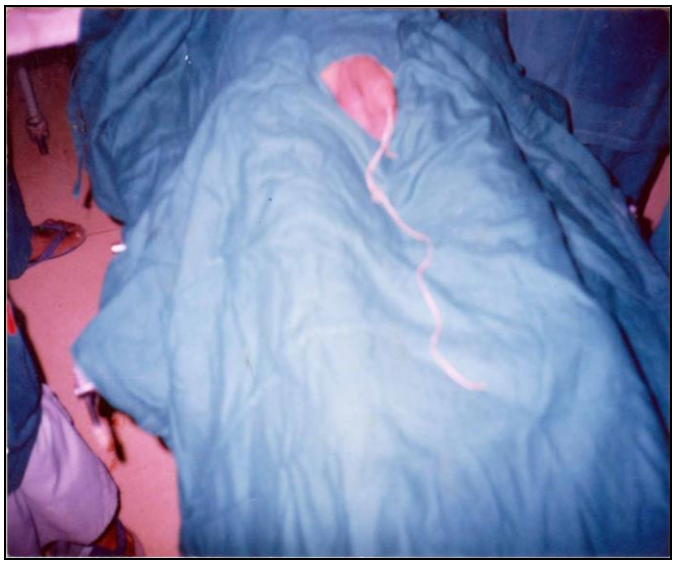

Fig 1: Patient with PVC wire prior to surgery

5. References

1. Sukkarich T, Smaldine M, Shah B. Multiple foreign bodies in the anterior and posterior urethra. Int Braz J Urol. 2004; 30:219-20.
2. Pal DK, Bag AK. Intravesical wire as foreign body in urinary bladder. Int Braz J Urol. 2005; 31:472-4.
3. Ayyilidiz A, Gurdal M, Nuhoglu B, Ersoy E, Huri E, Germiyanoglu C. A foreign body self-inserted via urethra into the bladder: Pocket Battery. Int Urol Nephrology. 2003; 35:251-2.
4. Tehran RK, Haroon A, Memon S, Turner D. Successful removal of a telephone cable, a foreign body through the urethra the urethra into the bladder: a case report. J Med Case Reports. 2007; 1:53.
5. Vezhaventhan G, Jayaraman R. Unusual foreign body in urinary bladder: A case report. The Internet Journal of Urology. 2007; 4:2.
6. Eckford SD, Persod RA, Brewster SF, Gingell JC. Intravesical foreign bodies: five-year review. Br. J Urol. 1992; 69:41-45.
7. Kenney RD. Adolescent male who insert genitourinary foreign bodies. Is psychiatric referral required? Urology. 1988; 32:127-9.
8. Rosenthal M, Berkman P, Shapira A, Gil I, Abramonic J. Urethral masturbation and sexual disinhibitionin dementia: a case report. Isr J psychiatry Relat Sci. 2003; 40:67-72.
9. Pec J, Straka S, Novoesky F, Novoesky F, Khiment J, Pec M, *et al*. Mechanical urethritis and ascendant genitourinary infection due to sexual stimulation of urethra by urethra by inserted foreign bodies. Genitourinary med. 1992; 68:399-400.
10. Atakan RH, Kaplam M. Intravesical migration of intrauterine device resulting in stone formation. Urology. 2002; 60:911.
11. Mustafa M. Erosion of an intrauterine contraceptive device through the bladder wall causing calculus: Management and review of literature. Urol Int. 2009; 82:370-1.
12. De Bernardis G, Haecker FM. Curious foreign body in the bladder of an adolescent. J Pediatr Surg. 2012; 47:e39-41.
13. Stravodimos KG, Koritsiadis G, Koutalellis G. Electrical wire as a foreign body in male urethra: a case report. J Med case rep. 2009; 3:49.
14. Krpina K, Sotosek S, Oguic R, Maricic A, Valemcic M, Fasuuckar Z. An unual case of acute urinary retention. Acta Clin Croat. 2010; 49:177-9.
15. Irekpita E, Imomoh P, Kesieme E, Onuora V. Intravesical foreign bodies: A case report and a review of literature. Int Med Case Rep J. 2011; 4:35-9.
16. Osca JM, Broseta E, Server G, Ruiz JL, Gallego J, Jimenez –Guz JF. Unusual foreign bodies in the Urethra and Bladder. Br J Urol. 1991; 68:510-2.
17. Moslemi MK, Sorani M. Self-inflicted male bladder foreign body. It's endoscopic removal using a rigid cystoscope and suprapubic forceps. Case Rep Urol, 2013; 2013:729013.
18. Garg M, Kumar M, Sankhwar S, Singh V. Self-inflicted long complex Uretro-vesical foreign body: Is open surgery always needed? BMJ Case reports, 2013. doi: 10.1136/ bcr-2013-009216.
19. Ejstrud P, Poulsen J. Laparoscopic removal of an electric wire from the bladder. Br. J Urol, 1997; 8:338.
20. Ko YH, Kang SG, Kang SH, Park HS, Lee JG, Kim JJ, *et al*. Removal of long complex foreign bodies from bladder using single laparoscopic port under pneumovesicum. J Laparoendosc Adv Surg Tech A. 2010; 20:639-42.
21. Tan LB, Chiang Huang CH. Foreign body in the urinary bladder. Gaoxiong Yixue zazhi. 1993; 9:604-609.
22. Reddy BS, Deniel RD. A novel Laparoscopic technique for removal of foreign bodies from the urinary bladder using carbon di oxide insuffulation. Surg Laparosc Endosc Percutan Tech. 2004; 14:238-9.
23. Van Ophoven A, De Kernion JB. Clinical management of foreign bodies of genitourinary tract. J Urol, 2002, 164.
24. Sukkarieh T, Smalcone M, Shah B. Multiple foreign bodies in the anterior and posterior urethra. Int. Braz J Urol. 2004; 30(3):219-20.

25. Hiller N, Zagal I, Solomom I. Intravesical foreign bodies. The danger of eroticism. Urologia. 1999; 66(2):168-9.
26. Datta B, Ghosh M, Biswas S. Foreign bodies in urinary bladders. Saudi J Kidney Dis Transpl. 2011; 22:302-5.
27. Aliabadi H, Cass AS, Gleich P, Johnson CF. Self inflicted foreign bodies involving lower urinary tract and male genitals. Urology. 1985; 26(1):12-16.
28. Van Ophoven A, Dekernion JB. Clinical management of foreign bodies of genitor-urinary tract. Urology. 2000; 164(2):274-344.
29. Garcia RV, Vareal SM, Fernandez GL. Urethral foreign bodies: apropos 2 cases, Arch Esp Urol. 1999; 52(1):74-6.
30. Sharma UK, Rauniyar D, Shar WE. Inravesical foreign body: Case report, Kathmandu Univ Med J. 2006; 4(3):342-344.
31. Kochakarn W, Pummanagura W. Foreign bodies in the female bladder: 20 years experience in Ramathibodi Hospital. Asian J Surg. 2008; 31(3):130-133.
32. Jensen CS, Watter S. Urinary tract infection: Occurrence causes and prevention. Ugeskr Laeger. 2007; 169(49):4265-4268.
33. Itruaide CA, Goza LF, Beyries TW, *et al*. Double Bladder Lithiasis from an intrauterine device: report one case. Arch ESP Urol. 2004; 57:160-162.
34. Guvel S, Tekin MI, Kiliac F, *et al*. Bladder stone around a migrated and missed intrauterine contraceptive device. Int J Urol. 2001; 8(2):78-79.
35. Dermici D, Ekmekcioglu O, Demitras A, Gulmez I. Big bladder stone around the migrated intrauterine ontraceptive device. Int Urol Nephrol. 2003; 35(4):495-496.
36. Hwang EC, Kim JS, Jung SI, Im CM, Yum BH, Kwon DD, *et al*. Delayed diagnosis of an intraurethral foreign body causing urosepsis and penile necrosis. Korean J Urol. 2010; 51:149-51.
37. Ito H, Ninomiya A, Furuuchi J, *et al*. A case of intravesical foreign body with a vesical rupture invading the peritoneal cavity: A case Report. Hinyokika Kiyo. 2009; 55(5):425-427.
38. Jacobs BL, Matoka DJ, Maranchie JK. Renal insufficiency secondary to delayed presentation of a retained foreign body. Can J Urol. 2009; 16(3):4697-4700.
39. Shoab RF, Anwar F, Barron D. Foreign body in the urinary Bladder: early CT Cystogram is investigation of choice. Pak Med Assoc. 2008; 58 (5):277-278.
40. Kim ED, Moty A, Wilson DD, Zeagler D. Treatment of lower Urinary tract obstruction secondary to an expandable foam sealant. Urology. 2002; 60(1):164.
41. Rafique M. Intravesical foreign bodies: Review and current management strategies. Urol J. 2008; 5(4):223-231.
42. Jung US, Lee JH, Kyung MS, *et al*. Laparoscopic removal of an intravesical foreign body after laparoscopically assisted veginal hysterectomy, a case report and review of literature. Surg Laparosc Endosc Percutan Tech. 2008; 18(4):420-427.
43. Habermacher G, Nadler RB. Intravesical holium Laser fragmentation and removal of detached resectoscope sheath tip. J Urol. 2005; 174:1296-7.
44. DeLair SM, Bernal RM, Keegan KA, Ellison LM. Ship in a bottle: Rapid extraction of large intravesical foreign bodies. Urology. 2006; 67:612-3.