

# Self-insertion of an odd urethral foreign body that led to Fournier's gangrene

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## Abstract

Self-inserted urethral foreign bodies (FBs) are rare. Neither reported case was the self-inflicted FB due to a lack of financial resources nor was either case complicated by Fournier's gangrene. We present a 54-year-old male who inserted a household pipe to relieve his urine retention. Unfortunately, the FB became stuck inside, perforated the urethra, and required perineal exploration. After it was removed, the urethra was closed over a 16F urethral catheter. The wound was complicated by severe infection and resulting Fournier's gangrene. This required an additional surgery for debridement and urine diversion. Retrospectively, it would have been better if the urethra had been left open with SP tube only. We are sharing a clinical lesson learned by the practicing urologist and surgeons. Conclusively, self-inserted FBs in the urethra may lead to a series of complications. Patients with limited financial resources need more attention and care because they may hurt themselves unintentionally.

**Keywords:** Fournier's gangrene, urethra, urethral foreign bodies

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## INTRODUCTION

Although rare, the male urethra is subject to the insertion of a variety of self-inflicted foreign bodies (FBs).<sup>[1,2]</sup> Sexual arousal and psychiatric illness are the most common motivations reported.<sup>[1,3]</sup> Fortunately, the vast majority of those FBs can be extracted from the urethra manually, or endoscopically, with minimal complications and good outcome. Surgical exploration is seldom needed, and in two series with urethral FBs, which included 17 and 27 patients, surgery was performed only once.<sup>[1,2]</sup> Here, we present a rare cause of FB self-insertion to be added to the literature, which is arguably due to a lack of financial or health


insurance resources. These social circumstances drove the patient to use a household electrical wire to relieve his urine retention. The wire unfortunately became stuck inside, perforated the urethra, and required a perineal urethrotomy. Our patient had a contaminated FB that led to severe infection, necrotizing fasciitis, and impending gangrene of the scrotum that could have resulted in septic shock if left untreated.

We aim to increase the awareness of practicing urologists and surgeons about these deleterious complications and to share our experience in such a rare challenging case for a better outcome in other such cases. Furthermore, it is an opportunity to remind the health-care professionals to

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pay more attention to those who have no health insurance resources.

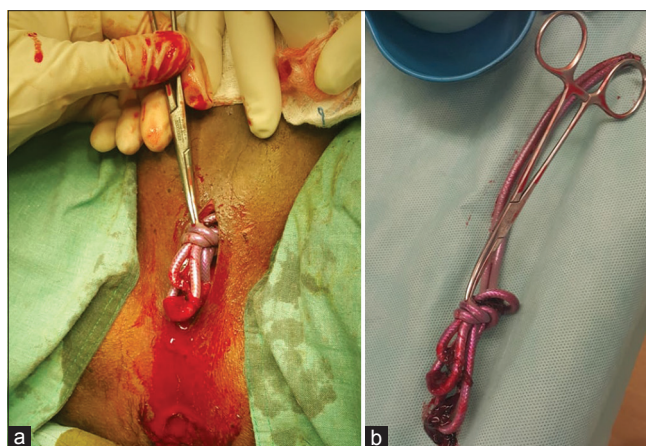
### CASE REPORT

A 54-year-old male patient presented first to the emergency room (ER) with urine retention that was managed by insertion of 14F Foley catheter. The catheter drained more than 600 ml of urine, and the retention was relieved. The patient could not tolerate the catheter, asked the emergency physician to take the catheter out, and then, he left the hospital. Two days later, the patient was brought in, by his roommate, with severe lower abdominal pain and inability to pass urine. Abdominal examination showed a palpable suprapubic bulge of a full bladder, and it was dull on percussion. There were mild bleeding per urethra, swollen scrotum (urinary extravasation?), and a household pipe protruding from the urethral meatus [Figure 1]. A knot was felt below the base of the prostate by rectal examination. Trial gentle removal of the pipe failed, and a suprapubic tube was inserted in the ER by the aseptic technique with local anesthesia. The patient was prepared for surgery. Under spinal anesthesia, and after draping and scrubbing, the urethra was explored by a vertical perineal incision that showed a big tear, of about 3 cm, at which the pipe was knotted, with evidence of urinary extravasation [Figure 2a and b]. After the FB was extracted, the urethra was closed by 3/0 Vicryl suture over 16F silicon catheter, and the wound was closed with a small corrugated drain. The patient was expatriate and did not have health insurance. He had limited financial resources, and when he paid money on the 1<sup>st</sup> day for catheterization, he did not want to come back. He tried to relieve his urine retention by means of a household tube. On the 2<sup>nd</sup> postoperative day, the wound looked better with the treatment of third generation intravenous (IV) antibiotics (ceftriaxone), and the patient took the SP tube out. Starting from the 4<sup>th</sup> day postoperatively, the perineal wound had started to become irritated and red. Areas of skin necrosis appeared on the scrotum, with expanding infection to the surrounding and suprapubic area, and the antibiotic was switched to Tazocin. Image of impending Fournier's gangrene is shown in Figure 3. The decision was made to take the patient again to the OR. Under ultrasound guidance, a SP tube was inserted, with difficulty, because of the SP swelling. A small incision was made in the suprapubic area to drain pus. Then, the subcutaneous area was bluntly dissected circumferentially, and facial planes were opened and washed with saline, H<sub>2</sub>O<sub>2</sub>, and

antiseptic solution. The perineal wound was inflamed with urine extravasation, so sutures were cut and washed, cleaned, and left open after removal of the urethral catheter. Finally, debridement was made with



**Figure 1:** The foreign bodies (electrical pipe) protruded outside the urethra



**Figure 2:** (a) Perineal urethrotomy that showed a perforated urethra by the knotted electrical pipe, (b) the electrical pipe after it was extracted



**Figure 3:** Infected perineal wound and impending Fournier's gangrene

excision of the necrotic scrotal skin that was closed. The patient stayed 5 days in the hospital receiving IV antibiotics (Tazocin) and bed-side care for the wound. He then traveled to his country with the SP tube and clean scrotal and perineal wounds.

## DISCUSSION

We present a rare case of a 54-year-old male patient who inserted an unusual household pipe, in an attempt to catheterize himself, and unfortunately, the FB became stuck inside the urethra and required perineal exploration. The extracted tube was more than 40 cm long, and to the best of our knowledge, this is the longest self-inflicted urethral FB reported.

The result was necrotizing fasciitis and impending Fournier's gangrene that required a second surgery for debridement. The patient may need another reconstructive surgery to treat the expected urethral stricture – all due to the circumstances of a self-treated medical problem, motivated by the poor social and financial circumstances of the patient. A variety of FBs self-inflicted in the urethra was mentioned in the literature (needles, pencils, seeds, pellets, wires, and others).<sup>[1,2]</sup> The problem is more common in male patients because the male urethra is longer and has multiple curves, unlike the female urethra. Diverse motivations were reported: sexual arousal, intoxication, and psychiatric illnesses were the most common.<sup>[4]</sup> Osca *et al.* reported that 5 of 8 patients of his series had psychiatric problems,<sup>[3]</sup> and Kenney recommended psychiatric referral for those patients.<sup>[5]</sup> Our patient had a different motivation and rational that has not been mentioned in the literature; lack of both financial resources and health insurance. Because self-inflicted FB in the urethra is a sensitive issue, patients are usually ashamed to present for medical advice, even with sepsis as the first presentation.<sup>[2]</sup> This is especially true when there are no symptoms, or when symptoms are mild, such as dysuria or hematuria. Because our patient had urine retention with severe pain, he presented early to the ER. In the case of small FBs, <1 cm, which are mobile, palpable, and within the distal urethra, manual extraction can be attempted.<sup>[2]</sup> If this fails, endoscopy is the second option that is successful in the vast majority in the published case reports.<sup>[1,2,6]</sup> As shown in the intraoperative pictures, the household pipe, in our case, knotted and looped inside the urethra and caused urethral tears, so neither manual extraction nor endoscopy was the optimal option, and we were required to explore through perineal urethrotomy. The cases in the literature requiring perineal urethrotomy are quite infrequent, 1 of

27 patients in Palmer *et al.* series<sup>[2]</sup> and 1 of 17 patients in Rahman *et al.* series.<sup>[1]</sup> Unusual FBs are expected to be contaminated and have a high risk for spreading infection. The household pipe that was used by our patient was likely contaminated, due to the resulting rapidly expanding infection and impending Fournier's gangrene. One case was found in the literature with similar consequences and required debridement on the 6<sup>th</sup> postoperative day, but it was less severe than our case.<sup>[7]</sup>

Retrospectively, we believe that it would have been better if the urethral catheter was removed and the SP tube catheter was reinserted and left alone. The perineal wound would be left open at the time, to be closed later after certainty that the infection was eradicated. The surgeon, in our case, focused on the integrity of the urethra and tried to avoid a future urethral stricture. However, this infection would be expected from a contaminated FB and urinary extravasation. It is a clinical lesson to be learned. In fact, the poor patient's social and economic circumstances, and related decision to self-treat, contributed to these unfortunate consequences. A simple catheter, inserted by a medical professional, could have saved this patient from these deleterious complications. The patient traveled home, as he had no health insurance. Therefore, we did not know the subsequent effects on the urethra, which adds to the limitation of our study.

Conclusively, although infrequently seen in clinical practice, self-inserted FBs in the urethra may lead to a series of complications. In the presence of significant urethral perforation, urinary extravasation and infection, it is better to leave the wound open to be closed later by 2ry sutures with urinary diversion by SP tube. Patients with limited health insurance need more attention and care because they may hurt themselves unintentionally in the process of self-treatment.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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## Conflicts of interest

There are no conflicts of interest.

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