CASE REPORT

# *An unusual penpal: case report and literature review of posterior urethral injuries secondary to foreign body insertion*

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*We report the case of a 57-year-old male who attended the emergency department after inserting a ballpoint pen into his urethra 24 hours earlier during a sexual encounter. Rigid cystoscopy was performed and confirmed the foreign body to have caused a partial rupture of the posterior urethra. It was subsequently removed using a combination of graspers and stone retrieval baskets. Self insertion of foreign bodies into the urethra is often as a result of psychiatric disturbance, alcohol intoxication or as a means of sexual gratification. Posterior urethral injuries are more commonly associated with pelvic trauma and iatrogenic injuries. Injury secondary to self insertion of a foreign body is infrequently reported. Temporary insertion of a urethral catheter may be necessary. We reviewed the literature in relation to this unusual problem. .*

**Key Words:** foreign body, posterior urethra, self insertion, urethral injury

## Case report

A 57-year-old male attended the emergency department complaining of lower abdominal and perineal pain as well as gross haematuria. Twenty four hours earlier he had inserted a ballpoint pen down the shaft of his penis via his urethra during a sexual encounter. He was unable to remove the pen afterwards via his urethra despite several attempts. He then attempted to extract the object retrogradely by pushing it further into his urethra with the aim of digitally removing it via his rectum. After numerous unsuccessful attempts he attended the emergency department for medical assistance and was subsequently referred to the urology team. The patient had no known psychiatric history but admitted to feeling depressed recently.

On examination the patient's temperature, blood pressure and pulse rate were all within normal limits. The pen was not palpable in his anterior urethra. The nib or writing end of the pen was palpable through the upper part of his scrotum. Rectal examination revealed the end of the pen tenting up his rectal mucosa but not breeching it. The rest of his abdominal examination was unremarkable and in particular there was no evidence of urinary retention. He denied any change in bowel habit or bleeding per rectum.

A KUB x-ray was performed which showed the radio opaque nib of the ballpoint pen present in the penile urethra, Figure 1. The shaft of the pen was not visible on x-ray. Routine bloods including full blood count and renal function were within normal limits. Mid stream urine examination showed the presence of numerous red cells.

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The patient was admitted and scheduled for rigid cystoscopy the following morning. On the morning of surgery a rise in temperature to 38.5°C was noted in conjunction with an increased white blood cell count. The patient was commenced on ciprofloxacin and gentamicin intravenously.

Rigid cystoscopy demonstrated the nib of the ballpoint pen proximal to the external urethral sphincter in the anterior urethra with the shaft passing through the sphincter and out through the prostatic fossa just to the right lateral aspect of the verumontanum. The pen was advanced slightly to disimpact it from the wall of the anterior urethral wall and was eventually removed fully intact after several attempts with a variety of graspers and stone retrieval baskets. This had been made more difficult due the shape and surface of the nib of the pen, Figure 2. A rigid sigmoidoscopy was performed following removal of the foreign body which showed inflammation of the anterior wall of the rectum. However the rectal mucosa appeared intact with no evidence of perforation. To confirm this indigo carmine was instilled via the cystoscope into the urethra and was not evident in the rectum on proctoscopy. A size

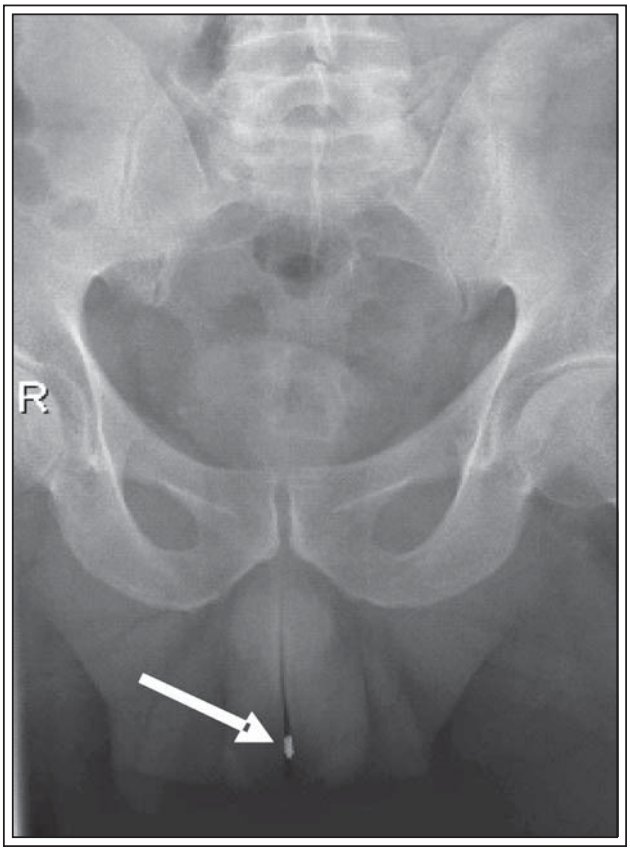


**Figure 1.** White arrow indicating radio opaque nib of pen in the genitourinary tract

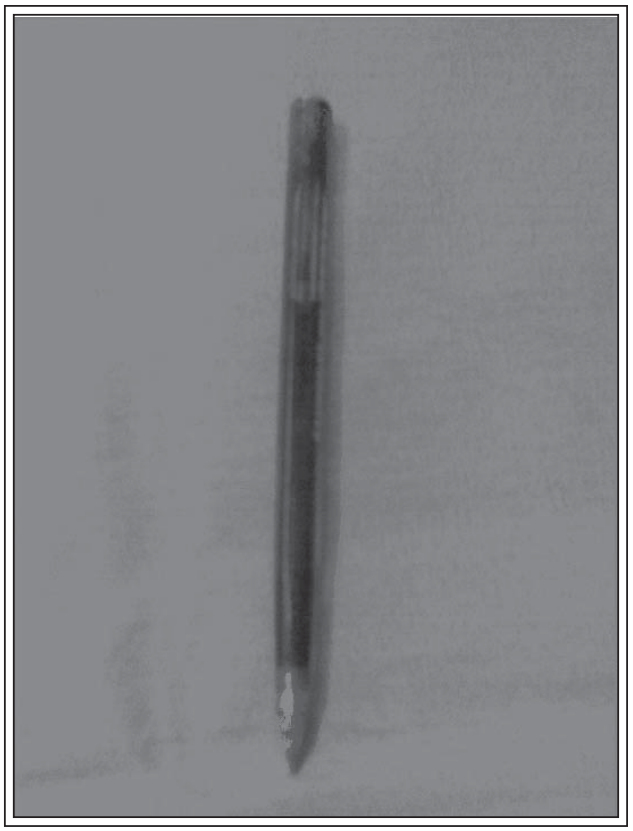

**Figure 2.** Intact pen after removal.

18 French silicone urethral catheter was placed. The patient was discharged on oral antibiotics for 1 week the following day. A successful trial without catheter was performed 3 weeks later. The patient declined follow up psychiatry referral although he did admit to a recent failing business venture and a tendency to depression.

## Discussion

The underlying reason for self insertion of foreign bodies into urethra is often due to intoxication[1] psychiatric disturbance[2] or as a means sexual gratification or masturbation.[3] The type of foreign body can vary greatly from a ballpoint pen, to safety pins and electrical cables.[4] Injuries to the anterior urethra such as mucosal tears, false passages or subsequent stricture formation have been reported.[1] However, posterior urethral trauma as a result of self insertion of a foreign body is infrequently reported and is more commonly associated with pelvic fractures or iatrogenic injuries.[5]

Symptoms may include dysuria, urinary frequency, poor stream and occasionally urinary retention.[6] The patient may also complain of gross haematuria.[7] Information regarding the type of foreign body should

be obtained and the patient should be examined for obvious evidence of trauma, urethral or bladder injury or urinary retention.

Plain radiography alone is often sufficient.[8] However CT or ultrasonography may be necessary should the foreign body be radiolucent or not clearly visible on plain radiography.[1]

Urethral catheterisation should be avoided initially until the type of foreign body is determined as this may cause further injury to the urethra.[1] Endoscopic removal is often the most successful means of removal and a variety of graspers and stone retrieval baskets may be necessary. In a series of 15 cases by Aliabadi et al, six patients had the foreign bodies removed successfully at endoscopy from the anterior urethra. Five of the remaining nine patients with foreign bodies in the posterior urethra and bladder required open surgery.[6] Open removal is often via suprapubic cystostomy or perineal urethrostomy and may be necessary for large or awkward objects. Other methods of removal include percutaneous transvesical retrieval,[9] interventional radiology techniques[10] and the use of holmium laser to fragment foreign bodies.[11] If there is a concern regarding a possible rectal injury proctoscopy should be performed.

Partial rupture of the posterior urethra may require temporary placement of a urethral catheter. Delayed complications include urethral stricture disease, urethral diverticulum and erectile dysfunction[1] and should be discussed with the patient as these may require follow up treatment. Routine referral for psychiatric evaluation of these patients has been debated and remains controversial. As many patients will be psychologically normal,[12] psychiatric referral should be decided on a case by case basis. Outpatient follow up for these patients is often difficult as they are often reluctant to return following treatment. □

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