A rare case report of self-insertion of a foreign body inside the urethra with peritoneal perforation

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ABSTRACT

Foreign bodies are occasionally reported in the urinary tract, especially in the urethra and bladder. We report a boy with a clear plastic object observed in bulbar urethra. First, he underwent laparotomy with a possible diagnosis of necrotizing pancreatitis, which was observed in the ward after observing a normal pancreas in surgery. The patient underwent cystoscopy three weeks after admission, according to the patient’s CT scan. It was hard to remove with a grasper, and the patient underwent laparotomy. His follow-up after surgery indicates a normal and stable condition with no additional complaints of nausea, vomiting, and generalized abdominal pain.

1. Introduction

Foreign bodies are occasionally reported in the urinary tract, especially in the urethra and bladder. Mostly, the foreign body is removed via the transurethral approach but sometimes we need more invasive procedures. Intravesical or intraurethral foreign bodies are usually found as a result of iatrogenic injuries, self-insertion, sexual abuse, assault, inquisitiveness, and mental disorder. A variety of symptoms like recurrent urinary tract infections, hematuria, or pain can be indicators of foreign bodies in the bladder or urethra. Some patients present with no clinical findings for foreign body removal.1 Knowing the history of patients with this condition can be difficult, especially for patients who have inserted the objects for sexual pleasure which can delay diagnosis.

Here we report a case of a young man who presented with a bladder and urethral foreign body to our hospital.

2. Case presentation

A 19-years-old man was admitted to our hospital with complaints of nausea, vomiting, and generalized abdominal pain from two days ago.

The patient agreed to report his case by signing written informed consent. The patient was fully conscious and his GCS was 15. His initial tests indicated WBC: 22,000, hemoglobin: 13, creatinine: 13) and urination from Foley was very low. Ultrasound was performed which reports excessive fluid within the peritoneum with no evidence of hydrenephrosis. Due to high creatinine, the patient underwent three emergency dialysis sessions. The patient underwent laparotomy with suspicion of necrotizing pancreatitis. During the operation, a large amount of fluid inside the peritoneum and severe adhesions between the intestinal loops were observed. The pancreas had a normal appearance. Peritoneal drain and Foley catheters were inserted and the patient was monitored in the ward.

After three weeks, with normalization of creatinine so the peritoneal drain and Foley catheters were removed, aiming at patient discharge. Due to observing the fluid leaking from the peritoneal drain site and the impossibility of re-implanting the Foley catheter, a consultation with a urologist was requested. On examination, the abdomen was soft, there was tenderness in the suprapubic area, and there was a swollen area just below the scrotum that was very painful to the touch. The urologist requested an abdominopelvic CT scan with a creatinine check for fluid...
Fig. 1. The abdominopelvic CT scan before removing the foreign object.
draining from the peritoneal drain site. In the tests, drain leaking fluid creatinine 4 and serum creatinine 1.1 were reported. The patient underwent cystoscopy after observing a suspicious object behind the bladder and abundant fluid collection in the perineal space (Around the urethra) and behind the bladder in the abdominopelvic CT scan (Fig. 1).

A clear plastic object observed in the bulbar urethra was hard to remove with a grasper, and the patient underwent laparotomy. Inside the peritoneal space in the rectovesical space, a hard object was seen which a pen was (Fig. 2). One end of the pen was inside the bulbar urethra and the other end was inside the peritoneal cavity, which allowed urine to enter the peritoneal space. Peritoneal damage was repaired Foley catheter was inserted retrograde with the help of a guidewire and with an open bladder. Cystostomy, peritoneal, and retroperitoneal drain were implanted and the bladder and abdominal wall were repaired. Despite the function of cystostomy and Foley catheter, the retroperitoneal drain was still functioning up to two weeks after surgery. Also, the swelling of the perineal area below the scrotum was persistent and painful, during this time two-needle aspirations were performed and fluid was sent for culture, both of which were reported as Escherichia coli. Therefore, a CT cystography was requested for the patient (Fig. 3). Leakage of fluid was observed from the bladder wall as well as from the damaged site of the bulbar urethra. To prevent leakage of urine and not perform re-surgery on the patient bilateral nephrostomies were installed for the patient. After 15 days, the peritoneal and retroperitoneal drains stopped working and the swelling under the scrotum was gone. At this stage, first, the left nephrostomy was closed, after 48 hours, due to the non-functioning of the drains, the left nephrostomy was removed. Then the same procedure was performed for the right nephrostomy. After removing the nephrostomies, this time first the cystostomy, after 48 hours, the retroperitoneal drain, and after 24 hours, the peritoneal drain was removed. Eventually, the patient’s Foley catheter was removed. The patient had normal urination with full discretion. His urinary urgency was improved with anticholinergic drugs and was discharged.

3. Discussion

The presence of a foreign body in the genitourinary system can be a challenge.\textsuperscript{1,2} In most cases, the foreign body is removed through the urethra, but in cases that have caused severe damage, such as our case, or in chronic cases where the foreign body has crystallized, open surgery may be needed.\textsuperscript{3} Several cases have been reported as foreign bodies in the bladder and urethra, most of which have been done for sexual purposes.\textsuperscript{4} Patients usually come to the hospital with symptoms such as urinary frequency, dysuria, nocturia, hematuria, gross bleeding from the urethra, difficulty in voiding, or complete urinary retention. However, some patients may be asymptomatic or have non-specific symptoms and most patients refuse to give an accurate history.\textsuperscript{1,2}

After getting a complete history, imaging modalities are needed to find the foreign body. In our patient, a CT scan showed the presence of a foreign body behind the bladder and free fluid in the peritoneum. Endoscopic removal of these foreign bodies is often considered a choice, but depending on the shape, location, and severity of the injury, other
procedures such as meatotomy, cystoscopy, urethrotomy, cystotomy, and even open surgery may be needed. As you can see in our case, the patient underwent surgery twice, and the third surgery was canceled at the initiative of the urologist in implanting a nephrostomy to prevent urine leakage. This approach can be used as a successful example in similar cases by urologists. It is recommended that the patient undergo a thorough psychological evaluation to detect underlying mental health disorders and reduce the risk of recurrence.

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