Case Report

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A Rare Case of Intravesical Foreign Body (Pencil): A Case Report

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ABSTRACT

BACKGROUND AND OBJECTIVE: The presence of foreign body in the bladder is a rare occurrence, which is often caused by the exposure of the individual him- or herself, or remaining part of the catheter, and the migration of medical equipment from adjacent organs or by a penetrating wound. Here is a case of a pencil in the bladder of a woman with mental retardation.

CASE REPORT: The patient is a 34-year-old woman who referred to a gynecologist with vague symptoms of abdominal and lower abdominal pain and a foreign body was detected in ultrasound on bladder. The patient was then referred to a urologist. There was no noteworthy point in the radiography. Computed tomography (CT) of the abdomen and pelvis was performed to confirm the nature, shape and position of the probable foreign body, and a 71 mm long object was observed. The patient then underwent cystoscopy and finally, after observation of the foreign body (which was a pencil), the pencil tip was fractured by a mechanical crusher and through the hole created in the tip of the pencil, it was held by a grasper and was removed longitudinally. The patient was discharged with oral antibiotics. The symptoms were resolved and the patient had no complaints in the follow-up.

CONCLUSION: Considering the case reported here, it is necessary to examine abdominal and pelvic pain or urinary symptoms (even nonspecific ones) in people with mental retardation in terms of the presence of foreign body in the bladder and pelvis.

KEYWORDS: *Bladder, Foreign Body, Lower Urinary Tract Symptoms.*

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Introduction

The prevalence of foreign bodies in the urinary system is relatively rare. Although there are no accurate reports of foreign bodies in the genitourinary system, studies have shown that the prevalence is higher in males and white people (83.6% in males and 68.4% in white people) (1). The most common foreign body site in the urinary system is the bladder, which is most commonly reported in children or patients with mental disorders (56.9%) (1, 2). Causes of the foreign body include insertion by the patient, remaining part of the catheter, and the migration of medical equipment from adjacent organs (such as an IUD from the uterus to the bladder).

In addition, penetrating trauma can also be a cause of foreign bodies (3). Regarding intravesical foreign body, various objects have been reported, including pins, clips, plastic toothpicks, ear cleaners, bullets, remaining part the Foley catheter (due to balloon catheter burst), thermometers and even leeches and fish (4, 5).

The most commonly reported symptoms of lower urinary tract were frequent urination, urinary burning, blood in the urine, which sometimes causes misdiagnosis such as bladder stones. The findings are sometimes non-specific as well, and in such cases, especially in the case of patients with mental disorders, foreign bodies should be considered (5, 6). Imaging is a useful paraclinical measure. A simple abdominal radiograph is very valuable in detecting opaque bodies. Other imaging methods, such as ultrasound, computed tomography, and IVP, can be used to assess the nature, exact location, and type of foreign bodies (7). Here is a case of a foreign body in the bladder whose shape, size (a 71 mm long pencil), material and length made it difficult to identify and pull out.

Case Report

A 34–year–old mentally retarded woman who referred to a gynecologist with nonspecific complaint of vague abdominal and lower abdominal pain. Since there was no specific diagnosis in the history and examination, complete abdominal and pelvic ultrasound was performed and 71 mm linear echogenic area was seen in urinary bladder and the possibility of a foreign body was raised (Fig 1). She was then referred to a urologist and after hospitalization, pelvic radiograph was performed, which showed no findings (Fig 2).

Subsequently, a spiral CT scan of the abdomen and pelvis without injection and without contrast was done and the image of the foreign body was observed in the bladder (Figs 3, 4, 5) and the patient was candidate for cystoscopy. No important point was found in cystoscopy at first, but further examination showed foreign body at the dome of the bladder.

Since the body could not be extracted easily, the pencil tip was fractured by a mechanical crusher and through the hole created in the tip of the pencil, it was held by a grasper and was removed longitudinally with no trauma (Fig 6).

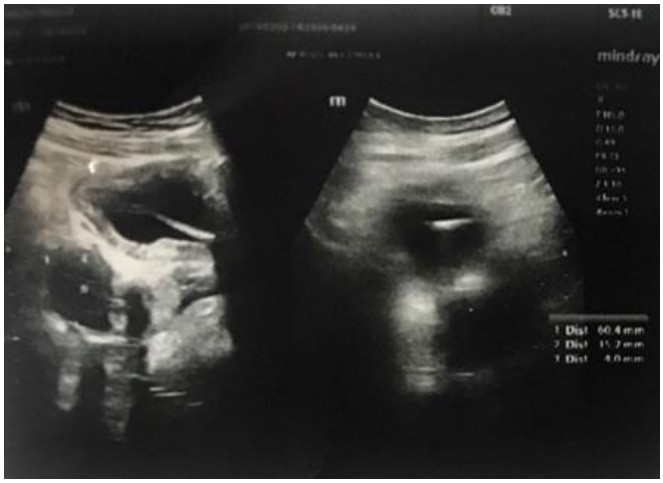


Figure 1. A 71 mm linear echogenic area representing the foreign body in the bladder

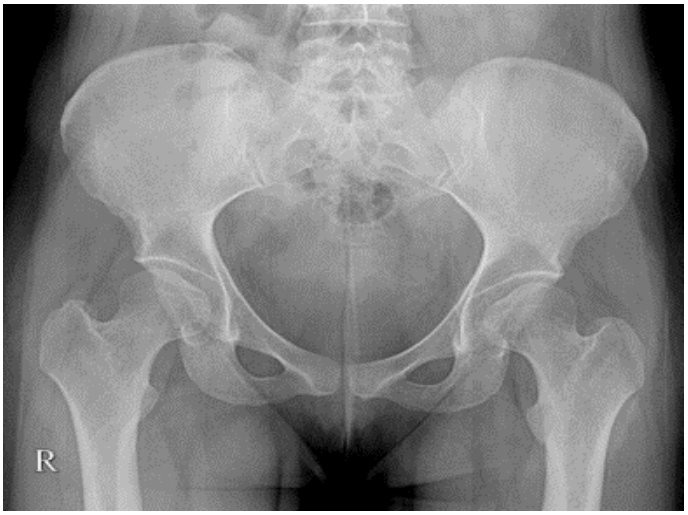


Figure 2. Pelvic radiograph

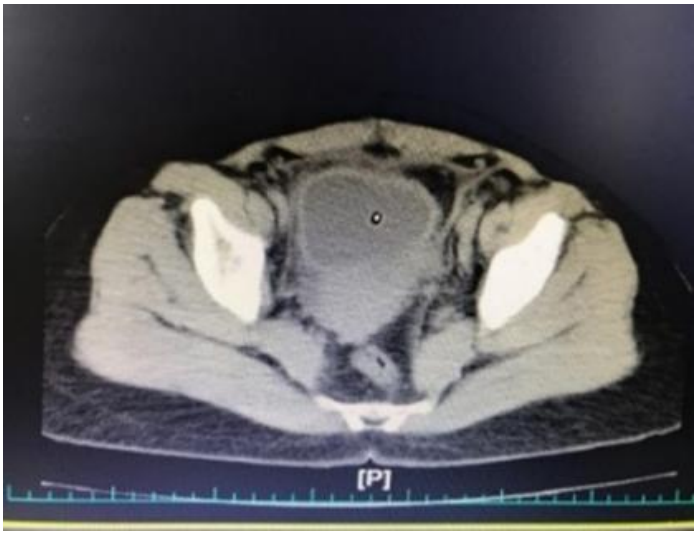
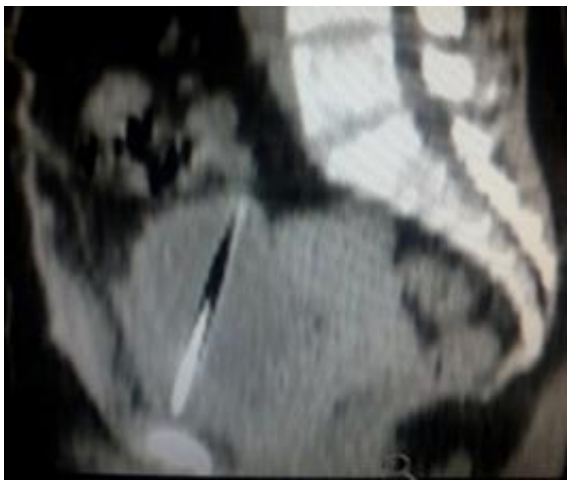
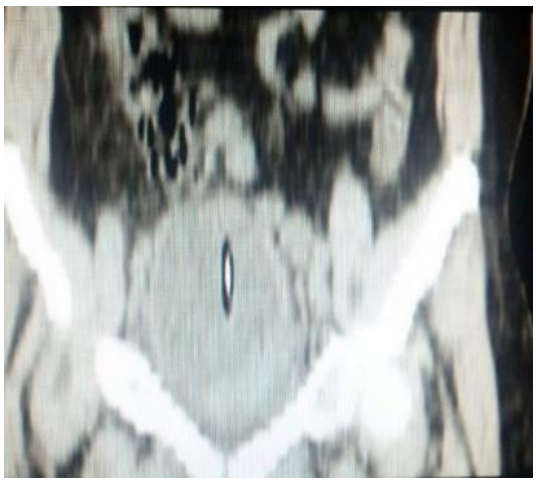


Figure 3. Image of foreign body seen on spiral computed tomography of the abdomen and pelvis without injectable or oral contrast (transverse view)





Figures 4 and 5. Image of foreign body seen on spiral computed tomography of the abdomen and pelvis without injectable or oral contrast (sagittal and coronal view)

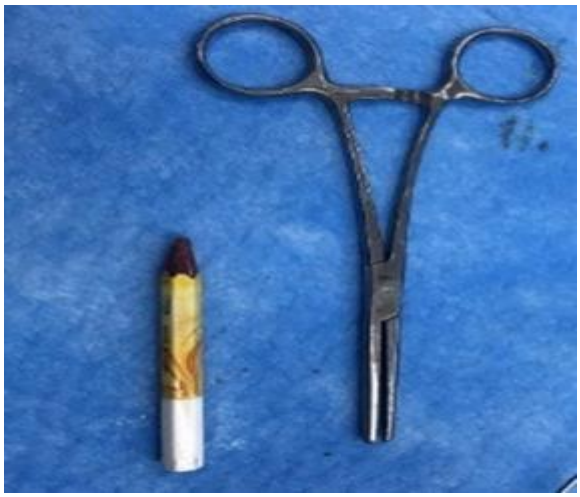


Figure 6. The image of the pencil removed from the bladder

Discussion

In this case, the reported intravesical foreign body had large length and diameter and was removed by a mechanical crusher and grasper. In the case reported by Kamali et al., a piece of rectangular glass entered the abdominal pelvis cavity from the rectum (8).

In a study of 1125 cases of intravesical foreign body in the US hospitals between 2012 and 2014, the highest prevalence was reported in men (83.6%) and white people (68.4%). In addition, mentally retarded patients with 56.9% and instrumental abuse with 11.1% had the first and second ranks. Overall, 64.9% of these patients required surgical intervention (1). In this reported case, the patient was a female and the foreign body was surgically removed.

Clinically speaking, the problem may rarely remain asymptomatic, or have nonspecific or vague symptoms, or even mimic the symptoms of acute and chronic bladder infection and may be confused with urinary stone (9).

In this case, a patient was presented with vague abdominal pain, and the presence of a foreign body was confirmed by follow-up and appropriate diagnostic measures.

In children, foreign body insertions occur more frequently in the rectum, bladder, urinary tract, which is mainly due to sexual desire or sexual abuse (10). In the above case, according to the patient's history, it seems that the patient's mental retardation and placement by the patient itself have led to this occurrence (with sexual intentions). Intravesical foreign bodies, in addition to causing infection, lead to the formation of stones and sometimes granulation tissue, and tumor-like space-occupying lesions and may even cause fistula into adjacent organs (2). A review of published articles reported a wide range of objects such as telephone wires, thermometers, shunt, pins, and AA batteries, and even in some cases, fish were reported as intravesical foreign bodies (11). In a study by Kamali et al., a rectangular piece of glass (due to sexual issues) that entered the abdominal pelvis cavity from the rectum was reported (8). In a five-year study in Pakistan, of the 16 reported cases of intravesical foreign bodies, 10 were in men and 6 in women (6).

In another study in India, of 9 cases of intravesical foreign bodies, 6 were male and 3 were female. Imaging methods play an important role in the diagnosis of foreign bodies in addition to clinical symptoms, which may have little accuracy. Simple radiography, excretory urography, ultrasound and computed tomography are common methods in the evaluation of these patients (12). Opaque and semi–opaque foreign bodies are easily recognizable by simple radiography. Ultrasound and computed tomography are complementary procedures for non – opaque foreign bodies (13).

Given this and other reported cases, and in the presence of urinary or even nonspecific symptoms, especially in children or in patients with mental disorders, foreign bodies should always be considered in differential diagnosis of urinary tract infections and stones.

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