

A Case of Textiloma Mimicking a Retroperitoneal Tumor

Sataa Sallami, Sami Ben Rhouma, Karim Cherif, Mohamed Hmidi, Ali Horchani

Department of Urology, La Rabta Hospital-University, Tunis, Tunisia

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ABSTRACT

Foreign bodies left inside the patient following surgical procedures are infrequently reported in the literature. Incidence figures might be underestimated because of medico-legal implications. A 56-year-old male had a right ureterolithotomy for a lumbar ureteral stone. He was asymptomatic for 3 years before presenting with intermittent right flank pain. Imaging showed a tumor-like mass in the right lumbar region. Surgical exploration revealed a textiloma.

KEYWORDS: Urinary surgery; Retroperitoneal space; Postoperative complication; Foreign body; Textiloma.

CORRESPONDENCE: Dr. Sallami Satâa, Department of Urology, La Rabta Hospital-University, Tunis 1007, Tunisia (sataa_sallami@yahoo.fr).

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INTRODUCTION

Textiloma and *gossypiboma* are nonmedical terms used to describe a mass of cotton matrix that is left inside a body cavity during a surgical operation [1]. The mass may present a serious diagnostic, therapeutic, and medico-legal problem. Such a foreign body can mimic a tumor during clinical and radiological examination.

The authors describe a case of textiloma in a patient presenting with lumbar pain 3 years after ureterolithotomy by open surgery. They also review the literature on diagnosis and management of similar cases.

CASE REPORT

A 56-year-old male presented with right flank pain. The pain had progressively worsened over a period of 4 months. The patient had undergone surgery for a ureteral stone through an iliac incision 3 years ago. Physical examination indicated good health status. There was no tenderness, swelling, or erythema at the incision site. Routine laboratory testing revealed nothing abnormal.

Computed tomography (CT) before administration of intravenous contrast medium revealed a well-encapsulated,

low-density mass with a diameter of 5 cm in the right retroperitoneal space below the kidney. The mass extended distally into the right psoas muscle. Administration of intravenous contrast medium (Figure 1) revealed an enhanced peripheral rim in the mass lesion (arrow), suggesting a retroperitoneal tumor or an abscess around a foreign body.

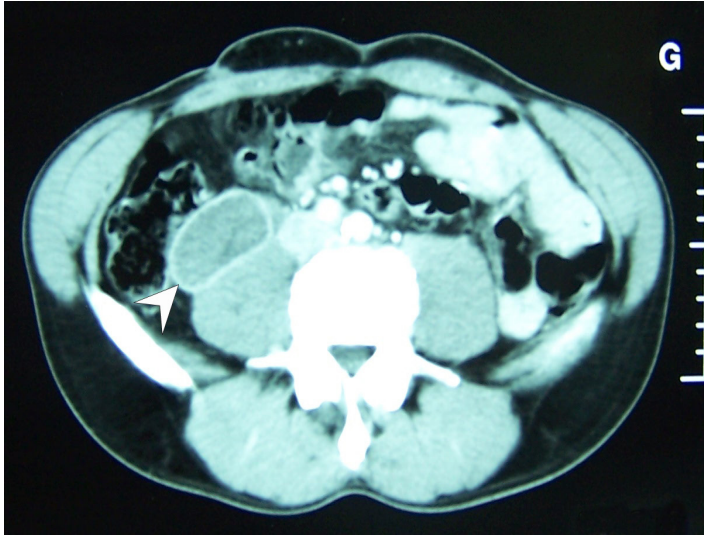
Perioperatively, the tumor was described as a solid mass with well-defined limits. The tumor was minimally adhered to the psoas muscle and ureter. The adhesions were dissected and the entire tumor was removed. Dissection of the mass confirmed the initial diagnosis of a surgical foreign body (cotton) (Figure 2). The postoperative course was uneventful and the patient was discharged on the second day. Histological examination of the tissues around the material revealed only chronic inflammatory infiltration and granuloma formation. Six months after the operation, both the physical examination and CT scan were normal.

DISCUSSION

Surgical objects are occasionally left in the peritoneal cavity despite precautions taken before, during, and after surgical procedures. Operative loss of sponges typically occurs during emergencies (when initial counts are often hurried or omitted),

Figure 1. Abdominal CT-Scan After Administration of Intravenous Contrast Medium.

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Scan reveals an enhanced peripheral rim in the mass lesion (arrow).

Figure 2. Cotton Materials Extracted From the Patient During the Operation.

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hemorrhagic procedures, time-consuming operations, change in operating theater staff, or operations in anatomical regions that are difficult to reach [2].

The most commonly retained foreign body is the surgical sponge. The word *textiloma* or *gossypiboma* refers to a mass composed of cotton matrix retained within a human body [1]. Cotton is an inert material that does not decompose.

The incidence of textiloma is hard to determine because of the possible legal consequences when reporting these cases. Moreover, most patients with textiloma may remain asymptomatic and be discovered incidentally after many years, as in the present case. The reported incidence, which is probably underestimated, ranges between 1 in 8800 and 1 in 18000 for surgical procedures of all types; the incidence increases to between 1 in 1000 and 1 in 1500 for laparotomy procedures [2,3].

Textilomas occur most frequently after appendectomy, cholecystectomy, and gynecological surgery [4]. Textilomas remain rare following urological surgery. In a review of the literature since 1950, Ballesteros et al [5] reported only 8 cases of textiloma after renal surgery. To date, the case reported by Taylor et al [6] features the longest period from surgery to manifestation of symptoms. They detected an intrapulmonary

foreign body 43 years after thoracotomy. The present case was diagnosed 3 years after ureteral surgery.

Diagnosis of Textiloma

The clinical presentations of textilomas are highly variable, ranging from incidental observation to severe postoperative complications. In the early period after surgery, these forgotten materials can lead to infections, abscess formation, chronic fistulae, and septic conditions [7]. However, 20% remain clinically asymptomatic for many years before causing a foreign body reaction in the surrounding tissue, with new clinical signs indicating significant mass effect [8].

The textiloma can be recognized on ultrasonography as an echogenic area with a strong posterior shadow due to the multiple fluid-cotton interfaces [9]. CT of the abdomen demonstrates a well-defined mass, usually with a thick, enhanced wall. Internal heterogeneous densities represent the various contents of a textiloma: the textile foreign body, granuloma formation, and pus [9]. In the present case, CT revealed a well-encapsulated, low-density mass with enhanced peripheral rim after administration of intravenous contrast medium.

The introduction of MRI has made it possible to diagnose most foreign bodies accurately. In general, most lesions caused by foreign bodies are hypointense on T1-weighted images and

hyperintense on T2-weighted images, thereby mimicking a solid tumor [10]. Despite these data, the diagnosis is difficult (if not impossible) if there is no radioopaque marker.

Management and Prevention

If the patient with a textiloma is asymptomatic, the necessity for treatment is questionable. However, treatment of a patient with symptoms should always consist of surgical removal. This may be extremely difficult due to dense adhesion and encapsulation [11].

Obviously, prevention of textiloma is the best approach. The primary preventive measure is counting the pieces of surgical gauze [11]. Small sponges should not be used during laparotomy and any sponges used should have radiopaque filaments. A plain X-ray film should be taken before ending the laparotomy procedure. The surgeon should completely explore the cavity for foreign materials before closing the patient after any operation [11].

The present authors have treated 3 cases of textiloma over a period of 15 years. They did not have any legal problems, but the patients were understandably unhappy and disappointed. The textiloma was considered a serious complication due to surgeon negligence. Civil lawsuits brought against surgeons for surgical complications are becoming more frequent, which reinforces the need for surgical teams to be more careful.

CONCLUSION

Textiloma is a rare urological complication. Radiological diagnostic methods are of great value, both in preventing the problem and in diagnosing its presence. The conclusive diagnosis is made during surgery. Textilomas carry an important medico-legal aspect for every surgeon. Prevention remains better than the cure.

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