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Intestinal Occlusion Induced by Intra-Luminal Textiloma: Case Report

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Abstract **Case Report**

Intra-luminal textiloma is caused by retention of surgical material in the body. It is due to an inflammatory process responsible of necrosis and progressive penetration of the pad through the intestinal wall. Its diagnosis is difficult because the symptomatology is not specific. The treatment consists in enterotomy and extraction of the textiloma. We report the case of a patient who suffered an intestinal obstruction and surgical exploration resulted in an intra-luminal textiloma. The treatment consisted in a grelic resection carrying the textiloma.

Keywords: Textiloma, abdominal surgery; intestinal obstruction.

INTRODUCTION

Textiloma is a rare postoperative complication. It is a term used to describe a foreign body made up of surgical pad(s) or drape(s) left in an operating field. It is an uncommon complication of abdominal and pelvic surgery [1, 2].

OBSERVATION

62-year-old patient operated one year ago for appendicular peritonitis by median laparotomy; consulted for an occlusive syndrome made of a stopping of gas and fecal matter, vomiting evolving in the last 6 days; the clinical examination shows a patient in good general state, apyretic with a tympanic distended abdomen and an empty rectal ampulla at the digital rectal examination. The abdominal x-ray showed air-fluid levels.

Biologically, the patient presented with functional renal insufficiency and an inflammatory syndrome.

The abdominal computed tomography (CT) evoked a grelic obstruction without signs of suffering.

Figure 1: Picture of the CT scan revealing a grelic distension with air liquid levels due to intraluminal textiloma

The patient was operated troughout a median laparotomy. A foreign body was found obstructing the lumen of the small intestine 100 cm from the ileo-caecal corner with several grelo-parietal fistulas responsible of small intestine distension. A small bowel resection was performed, removing the intestinal mass (figure 2) and creating a wolkman's stoma. Enterotomy of the operative specimen showed an impacted pad in the intestinal wall.

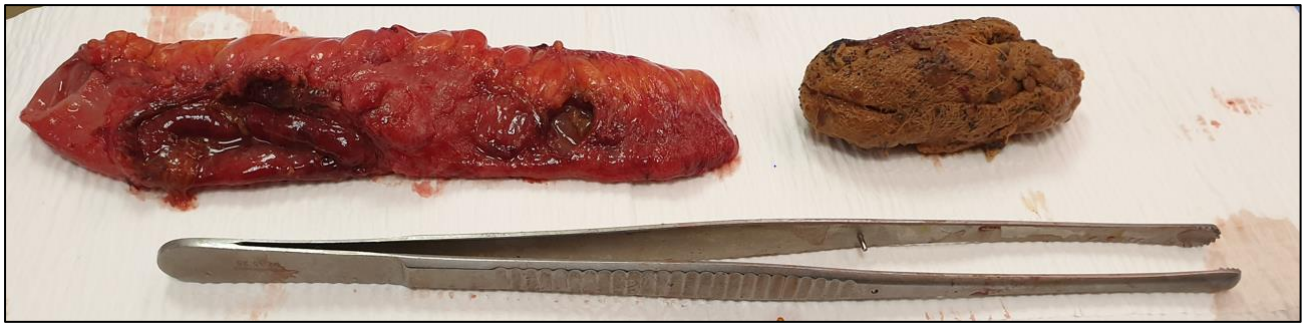

Figure 2: Showing the resected intestine with the textilome that was stuck within

DISCUSSION

Intra-abdominal textiloma remains an uncommon complication after abdominal surgery. Isolated cases or short series have been reported after the first case of textiloma described by Wilson in 1884[3].The reported frequency in the literature is 1/1000 to 1/10000 [4]. The literature review (117 cases published from 1952 to 1993) emphasizes the predominance of intraperitoneal Textilomas (52%), although other areas are affected: gynecological (22%), urological and vascular (10%), bone and spinal (6%), and others (10%). Material forgetfulness is still the main concern of the surgeon during any surgery and the consequences can be dramatic for the patient [5].

Several risk factors have been identified[6], including the difficulty of the surgical intervention, interventions during the second half of the night, changing the surgical team, significant blood loss, failure to count the compresses and instruments, exhaustion due to long interventions and surgery on obese people [4, 7].

The natural history of a textiloma depends mainly on the organism's reaction to the foreign body [8]. Surgical pads and cotton wool do not decompose due to their inertia [9]. Physiopathologically, two types of immune reactions occur, the acute necrotic form and the chronic form. The acute necrotic form is caracterised by the predominance of exudative reactions responsible of clinical and biological manifestations. In the chronic form, an aseptic fibrous capsule is formed around the foreign body, thus limiting the inflammatory reaction. In this case, clinical demonstrations are rough and the "textiloma" acts as a slowly evolving tumor process [10].

In some cases fistulation through natural gastrointestinal or urogenital orifices may occur; this fistulation is related to the presence of anaerobic bacteria causing local pressure of the foreign body on the necrosis, fibrous inflammatory response and a tendency to encystation [10, 11]. Progression of the pad to the terminal ileum is promoted by intestinal peristalsis [9].

The clinical manifestations are numerous and diverse; they can be manifested by a long history of abdominal pain, acute intestinal obstruction, deep suppurations, abdominal mass, but above all, they can be discovered during surgery, simulating a tumor, or after endoscopic examination [10,11].

The diagnosis of textiloma is largely based on imaging and can be made on an abdominal X-ray by demonstrating an opaque intra-abdominal structure which is more easily recognised when the pad is marked.

On tomography, the density depends on the nature of the foreign body and the presence or not of granuloma or abscess. Typically, the textiloma appears as a heterogeneous hypodense mass containing gas bubbles in its centre (spongiform appearance), with a peripheral hyperdensity that enhances after injection of contrast medium [3, 9].

In the chronic form, gas bubbles may be missing, as they are usually resolved within several years [5, 9].

The standard treatment of textiloma occlusions is enterotomy and extraction of the textiloma [9]. Surgical exploration revealed in all cases an inflammatory pseudotumour mass with multiple parietal adhesions and extensive resections were performed as in our case in relation to the presence of a stenosing inflammatory pseudotumour mass. The diagnosis of endo-luminal textiloma is most often made after bowel resection and opening of the surgical specimen as in our case [1].

However, suspicion of an intra-gastrointestinal textiloma confirmed on the tomography without signs of acute bowel obstruction, abdominal mass or deep suppurations may require conservative treatment with monitoring until natural clearance, although some rare cases have been documented [12].

Textiloma is a source of many medico-legal issues. It is frequently the cause of professional liability claims. It is an unintended and predictable complication of surgery that necessitates the use of all possible means to prevent it.

Over the past decades, monitoring procedures have been developed, tested, revised and adopted to improve patient safety. Numerous studies have shown that the introduction of checklists in operating rooms are associated with a significant and concomitant reduction in mortality and surgical complications [10]. The checklist for surgical safety in the context of the Safe Surgery Saves Lives project is proposed by the World Health Organization [7, 13]. It is mandatory to introduce these checklists in all operating rooms in order to minimize the risk of any human failure.

CONCLUSION

Textiloma is a serious iatrogenic complication because of its clinical consequences and medico-legal repercussions. Its discovery is generally late. Endo-luminal textiloma is rare. It must be considered in the diagnosis of abdominal or pelvic masses in patients who have already undergone abdominal surgery. Its prevention requires rigour, the marking of compresses, and the comparison of counts, which reduce the incidence and the multiple medicolegal implications.

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