**Postoperative intra-abdominal foreign body: resemblance to neoplasm. Report of a case and review of the literature**

Ismael Gil-Romea,* María Pilar Valcarreres-Rivera,* Pilar Palacios-Gasos,* Laura Lamata-Delaorden,* Jesús Quintana-Martínez,* María Jesús Moreno-Mirallas**

* Servicio de Cirugía A, Hospital Clínico Universitario “Lozano Blesa,” Zaragoza, Spain
** Servicio de Urgencias. Hospital “Royo Villanova,” Zaragoza, Spain

**Correspondence:**
Dr. Ismael Gil Romea
Avda. Alcalde Gómez Laguna N° 54, 2ºC
Zaragoza 50009 Spain
Tel: 34 976 756882
E-mail: igilromea@hotmail.com

Received for publication: 12-19-2011
Accepted for publication: 3-12-2012

**Abstract**

**Introduction:** Gossypibomas or textilomas are cotton or synthetic materials that remain in the abdomen postoperatively. Its impact is difficult to assess due to medico-legal implications; hence, the interest in the publication of this type of pathology.

**Clinical Case:** We present the case of a 76-year-old female who had a hysterectomy + double adnexectomy 6 months prior to admission to our hospital, apparently without perioperative complications. When the patient was assessed in our hospital, she presented a clinical picture simulating a malignancy. In our case, the patient had signs and symptoms of advanced intra-abdominal malignancy: chronic anemia, significant weight loss and palpable abdominal mass. Diagnostic imaging comprised computed tomography and colonoscopy, determining the causes of the signs of intra-abdominal gossypiboma. The patient was surgically intervened with three bowel resections aiming to extract the foreign body, with satisfactory postoperative evolution. The patient has remained asymptomatic to the present time.

**Conclusion:** Intra-abdominal gossypibomas are exceptional. Diagnosis is accomplished through imaging and, if gastrointestinal neoplasm is suspected, endoscopic studies are performed. Primary differential diagnosis must be made with intra-abdominal malignancies.

**Key words:** intra-abdominal textiloma, gossypiboma.

**Introduction**

The term “textiloma” refers to surgical foreign bodies that remain in various surgical fields and may occur in surgeries carried out for thoracic, abdominal, orthopedic, neurosurgical and vascular pathologies.1–4 The actual incidence of this problem is difficult to assess because of the problems of identifying cases, among other reasons, for medical/legal implications that occur in relation to this surgical “accident.”

The clinical picture may be variable, and its acute presentation appears as an immediate surgical complication, predominantly an exudative response with frequent formation of skin abscesses and fistulas. However, the predominant clinical long-term presentation, which may be symptomatic months or even years after surgery, and the clinical manifestations are suggestive of malignant tumors.1,2

Regarding textilomas in the abdominal cavity, the more frequent evolution is towards digestive fistula formation because of the body’s defense mechanism where it is trying to eliminate the foreign body. These migrations can cause various problems related to a local septic process causing the fistula and subsequent migration of the textiloma.3–5

Clinical support for malignant neoplasm along with the diagnostic process including computed tomography (CT) and colonoscopy as well as surgical treatment, which combined colonoscopy and gastrointestinal surgery, creates an interesting view of this condition. For this reason, we present the following case report.

**Clinical Case**

We present the case of a 76-year-old female patient with a history of systemic arterial hypertension, hypercholesterolemia, laparoscopic cholecystectomy, hemorrhoidectomy and abdominal hysterectomy (performed in another hospital) 9 months prior to coming to our hospital. Six months
before her admission, the patient had symptoms consistent with constitutional syndrome: weight loss of 8 to 10 kg and blood abnormality such as microcytic anemia in a study conducted by her primary care physician. Physical examination showed a poorly defined hypogastric tumor without signs of peritoneal irritation. Fecal occult blood test was positive.

With the above findings, and due to the clinical deterioration of the patient, she was admitted to our hospital with a suspected diagnosis of intra-abdominal malignancy. Colonoscopy detected a textiloma at the level of the cecum (surgical sponge), which could not be removed in this manner because the patient, although receiving analgesia, demonstrated intense pain upon mobilization of the material.

To complete the study, we conducted abdominopelvic CT showing an inflammatory mass surrounding what appeared to be a surgical foreign body (textiloma) detecting the radiopaque control of the sponge (Figure 1).

The patient was informed of the findings and scheduled to be anesthetized. A new colonoscopy was performed, which showed a cecal fistula piercing the textiloma of the wall of the transverse colon (Figures 2 and 3). With this discovery, we conducted an exploratory laparotomy that showed a mass formed by ileal, jejunum and cecal loops, which incorporated the textiloma in its lumen (Figure 4). In this situation, we proceeded to release the affected bowel loops (Figure 5), specifying three bowel resections: two of the small bowel and one in the cecal pole (Figure 6). The patient’s postoperative course was uneventful and without complications and she was discharged 8 days postsurgery. Currently the patient is asymptomatic.

**Discussion**

Textilomas are more frequent in females and can be ordinary or related to various gynecologic pelvic surgeries. They predominate in the abdominal cavity, although they have been described in thoracic, orthopedic, and cranial regions, even in inguinal regions as in the case reported by Dr. Ortiz Mendoza following a saphenectomy. Regardless of the type of surgery, symptoms can develop months or even years after the surgical event that caused the presence of the foreign body.
Diagnosis is confirmed with imaging tests. In some cases, conventional x-rays would suffice. Sometimes ultrasonography would be definitive, although there are studies in which only 57.1% of the cases are identified with this technique. For various reasons, CT offers different diagnostic images where they are demonstrated to be “acute” or “chronic” textiloma. “Acute” textiloma shows a heterogeneous image containing a large amount of trapped air, whereas in chronic textiloma the images resemble a tumor without contrast uptake with calcifications within.\(^{1,9,15-20}\)

The legal and medical implications of these cases require us to be extremely careful to avoid the permanence of surgical materials in the surgical field, causing a textiloma. We believe these materials should always incorporate a radiopaque marker, enabling early detection and avoiding diagnostic confusion. This, combined with verification of its presence and recovery of all surgical gauze pads by the nursing staff, will decrease the risk of this complication. The opportunities of legal disputes in these cases along with the diagnostic difficulty with malignant tumor processes that can lead to invasive diagnostic tests or extensive surgical resections make preventive measures essential to avoid the presence of textilomas. The reported literature states

Clinical manifestations in our patient suggested an intestinal obstruction, constitutional symptoms, and palpable tumor. The patient’s age led us to the diagnosis of probable intra-abdominal neoplastic processes. What remains unclear is the pathophysiological mechanism by which the migration occurs of these textile materials into the intestinal lumen. It has been shown to be related to acute and chronic inflammation of the foreign body with physiological fibrinous aseptic response with adhesions, encapsulation and the formation of granuloma or pseudotumor that, combined with inflammatory exudate, may favor the presence of abscesses and fistulas.\(^{2,11-15}\)

Figure 4. Intraoperative image where we can observe an inflammatory plastron with intestinal fistula where the textiloma is detected and located within the intestinal lumen after migration from the peritoneal cavity.

Figure 5. Initiation of the removal of intestinal fistulas where the pad that pierced through it can be observed.

Figure 6. Surgical specimen.
that the textiloma may increase morbidity, and mortality may even reach 25% in some of the studies analyzed.\textsuperscript{21-24}

In conclusion, prevention of textilomas consists of three fundamental pillars:

- accurate count of all materials coming into contact with body cavities
- thorough surgical exploration prior to closure of the cavity
- use of radiopaque markers

When in doubt, intraoperative radiological control should be performed.

Diagnosis with imaging tests shows the usefulness of CT which, as in our case, may require other complementary techniques depending on clinical examination, such as a colonoscopy as was the case in our patient.

References