

Abdominal Gossypiboma (Textilioma)

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Citation

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Abstract

A synonym for this word is textiloma, which combines the word textile (until recently most surgical sponges were made of cloth) and the suffix -oma, meaning a tumor or growth. Historically, gossypiboma is derived from the Latin word gossypium for cotton and the Swahili boma, for (place of concealment). The term gossypiboma denotes a mass of cotton that is retained in the body following surgery which usually create medico-legal problem especially for surgeons. Retained surgical sponge is a rare but preventable occurrence. The patient presented herein is the second reported case since 1983, at Misurata Teaching Hospital – surgical ward, demonstrated by preoperative imaging studies. In this case entity presented as a chronic abdominal mass which simulated a primary small bowel tumor. The role of abdominal diagnostic imaging of gossypiboma is highlighted.

CASE REPORT

A 41-year-old woman was referred to Imaging Department at Misurata Teaching Hospital – Libya with a history of diffuse vague abdominal pain and nausea due to retained laparotomy towel three months after open cholecystectomy. On physical examination there was no remarkable abdominal distension. She described a short febrile post-operative period following the initial surgery; however, there had been no fever for the last two months. The whole blood analysis showed a marked leukocytosis (white blood cells: $22.000 / mm^3$). Other biochemical parameters were within normal limits. Abdominal Plain x-ray CT scan did not show any sign of a radio-opaque suspected density (Fig, 1).

Figure 1

Figure 1: Plain x-ray CT scan of the abdomen did not show any sign of radio- opaque marker



However, Ultrasonography of the abdomen revealed a soft tissue mass with echogenic center cast posterior acoustic shadowing (Fig,2),

Figure 2

Figure 2: Conventional Ultrasonography revealed a soft tissue mass with echogenic center and acoustic shadowing thrown posteriorly



Contrast enhanced abdominal CT showed a round, well-defined soft-tissue mass with dense, enhanced rim, containing an internal low-density circular area; located within the left lumbar region (Fig.3).

Figure 3

Figure 3: Contrast enhanced abdominal CT showed a round, soft-tissue mass with enhanced border, containing an internal low-density circular area within the left lower abdominal quadrant.



The presence of a foreign body was considered. It was surgically removed and postoperative recovery was uneventful.

DISCUSSION

The term “gossypiboma” denotes a cotton foreign body that is retained inside the patient during surgery [1]. It has been reported to occur following surgical procedures such as abdominal, thoracic, cardiovascular, orthopedic, and even neurosurgical operations [1,13]. Although the real incidence is unknown, it has been reported as 1 in 100 to 3000 for all surgical interventions and 1 in 1000 to 1500 for intra-abdominal operations [2]. The clinical presentation is either acute or relatively delayed. Acute presentations generally follow a septic course with abscess and/or granuloma formation. Delayed presentations may follow months or years after original surgical intervention, with adhesion formation and encapsulation. Most will present as a mass or with subacute intestinal obstruction, although rarely they may result in fistula, free perforation or even extrusion [3]. Non-specific clinical symptoms and inconclusive imaging findings may preclude an accurate diagnosis [4]. However, it can be diagnosed preoperatively in many cases utilizing variant radiological modalities such as plain radiography when surgical textile materials have been impregnated with a radio-opaque marker, ultrasonography (USG), computerized tomography (CT), magnetic resonance imaging (MRI), and gastrointestinal contrast series [5,14]. Commonly the surgical sponges have readily recognized opaque markers which are clearly visible on plain radiographs. When these markers are identified, they should be assumed to represent retained surgical sponges. Zbar AP, et al [6] reported that the diagnosis is easily made by plain abdominal radiography, when a radio-opaque marker is seen. However, this imaging method is not helpful when these markers are disintegrated or fragmented over time. Ultrasonography is another diagnostic tool which may well demonstrate foreign bodies. The presence of brightly echogenic wavy structures in a cystic mass showing posterior acoustic shadowing that changes in parallel with the direction of the ultrasound beam has been reported as a diagnostic feature of Gosypiboma by Zbar and associates [6]. A retained surgical sponge usually has the characteristic appearance on Computed Tomography which shows a soft tissue mass with air-bubbles. This finding may be confused with an abscess specifically in the early post-operative period, especially when a fistula is present. CT findings of gossypiboma, particularly In long standing cases, may be indistinguishable from intra-abdominal abscess, since air bubbles and calcification of the cavity wall as well as contrast enhancement of the rim may be seen in both conditions [6,15]. When a fistula develops between the cavity containing the foreign body and the

gastrointestinal lumen, contrast x-ray studies may reveal both the presence and the exact site of the fistula [7]. Development of a fistula to neighboring organs such as stomach, duodenum or intestine occurs infrequently [8,11]. The longer the retention time, the higher is the fistulization risk. Foreign bodies (e.g. surgical sponge) may completely migrate into the ileum without any apparent opening in the intestinal wall [9].

Once gossypiboma is diagnosed, it should be removed. Although some non-surgical approaches such as percutaneous radiological retrieval of foreign bodies are reported, they might either be unsuccessful or generate attendant complications [10]. However Surgery had been the mainstay in the removal of the foreign bodies for many years. Gossypiboma also carries some medico-legal implications besides many diagnostic and therapeutic difficulties; moreover, gossypiboma may be misdiagnosed as a malignant tumor and lead to unnecessary invasive diagnostic procedures or extensive extirpative surgery which may result in further complications [6]. All surgical textile materials and instruments should be counted once at the start and twice at the end of surgery; however, counts are not always sufficient, since most reported cases occur in spite of a normal pack count [6]. Dhillon and Park [11], reported a patient with retained laparotomy sponge 11 months after hysterectomy; the sponge count had been performed twice according to the operative record. Gawande et al. [2]; suggested the routine radiographic screening of high-risk patients before they leave the operating room even when counts are documented as correct. We found that the most common risk factors associated with retained foreign bodies are unplanned changes of operative procedures in emergency surgical interventions, and when operating on obese patients with excessive amounts of fat. The importance of this case report is that, the retained laparotomy towel was relatively silent a part from non specific diffuse abdominal pain and did not lead to any complications and its discovery was relatively incidentally. This is the second reported patient at our hospital in surgical ward whom a retained surgical textile material could be demonstrated by preoperative imaging in the period of twenty years.

In conclusion, this case is presented to highlight the fact that this condition should always be included in the differential

diagnosis of patients who have had previous surgery and vague abdominal symptoms. gossypiboma has to be considered as a strong diagnostic possibility in postoperative patients presenting with unexplained symptoms such as pain and intestinal obstruction [12]. We believe recommend that Radiologist should take the postoperative responsibility hand in hand with the surgeon to avoid Legal implications as well as confusing configuration patterns cause considerable dilemma in the accurate diagnosis of abdominal gossypiboma where recognition of this entity will lead to appropriate management, reducing morbidity and mortality in these patients.

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