A 34-year-old asymptomatic gossypiboma: A fortuitous diagnosis revealed by appendicular peritonitis: A case report

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Abstract

Gossypiboma is a retained surgical sponge. Patients are usually symptomatic leading to early removal of this entity. We are reporting a 33-year-old asymptomatic gossypiboma discovered by appendicular peritonitis on the radiological images. The 64-year-old patient underwent a laparotomy with excision of the gossypiboma. The postoperative period was uneventful.

Keywords
ancient, gossypiboma, surgical management, texitilloma

1 | INTRODUCTION

Gossypiboma, texitilloma, or retained surgical sponge is a pseudotumoral lesion composed of nonabsorbable surgical material with a cotton matrix.1 Gossypiboma is derived from the Latin Gossypium (cotton) and the Swahili expression boma (place of concealment).2,3 There is a huge lack of publication of this entity in the literature because it is considered a failure in any operation. Establishing the diagnosis can prove clinically challenging especially a long time after surgery; the tentative diagnosis is often that of a tumor.

The time passed from the previous operation to the presentation with gossypiboma between 1 day and 40 years.4–6 Most patients are symptomatic7 leading to the removal of the retained foreign body after a few days of surgery, but some have been diagnosed many years later.8 We are reporting a 34-year-old asymptomatic gossypiboma discovered in an emergency situation of a right iliac fossa pain.

2 | CASE PRESENTATION

A 64-year-old man had undergone a laparotomy for abdominal trauma in 1987 performed at another hospital. We had no medical report or information about that surgical procedure. The patient was admitted to our hospital’s general surgery department with right iliac fossa pain about a few days ago. The patient denied any history of vomiting, constipation, or bodyweight loss. On physical examination, a laparotomy scar was noted, but no palpable mass and a fever. Abdominal examination revealed a generalized abdominal tenderness, with the maximum of tenderness was on the right iliac fossa. Laboratory tests
revealed a biologic inflammatory syndrome. At this stage, a computerized contrast tomography scan was performed, showing appendicular peritonitis associated with a bulky tumoral lesion with heterogeneous density, well-defined borders with heterogeneous enhancement after intravenous contrast infusion located in close contact with the liver, and the abdominal wall without any specific communication (Figure 1).

The diagnosis of gossypiboma was suspected. The patient underwent an abdominal laparotomy. The cut section of the mass showed a large surgical sponge confirming the diagnosis of gossypiboma (Figure 2).

Meticulous adhesiolysis was performed, and the mass was safely excised. Appendicectomy and peritoneal toilet were performed, and the postoperative period uneventfully went. The patient was discharged after 3 days and did not present any recurrence of pain or symptoms at 6 months of follow-up.

3 | DISCUSSION

Gossypiboma is an important topic, seldom reported because of the medicolegal issues and a significant embarrassment; it is considered by some authors as a severe postoperative iatrogenic complication.7

This variety of reports makes the actual diagnosis and incidence hard to define. The estimation of retained sponges was reported in 1/100–1/3000 of all surgical interventions9–11 and about 1/1000–1/1500 of intra-abdominal operations.11,12

Gossypibomas have been reported to occur following all surgical procedures, most frequently reported after abdominal surgery (52%), gynecological surgery 22%, and urological surgery.13,14 Besides, some gossypibomas were reported even after orthopedic and neurosurgical surgery.15,16

The sponges are inert and do not undergo decompensation leading to two types of reactions. The first type is the exudative reaction, causing an opening into an adjacent adherent hollow organ that leads to fistula and acute abscess formation in which pain and fever develop early. The second type is the aseptic fibrous tissue reaction leading to granulomas formation and encapsulated masses into the abdominal cavity; this reaction can make adhesions in the adjacent organs that do not generate any significant symptoms.4,10,13,14

All these reactions and constatations make the gossypiboma a unique entity with nonspecific symptoms. The majority of patients are symptomatic, and the most principal complaints are abdominal pain, mass, vomiting, abdominal distension, abscess, fistula, and protrusion through the surgical wound, rectum, or bladder.4,17 Rarely, gossypibomas are asymptomatic and the diagnosis is performed associated with another pathology in a fortuitous way on radiological images like our case.

The diagnosis is uncommon and may mimic hydatid cyst18 and all types of tumors such as mesenchymal tumors,19 retroperitoneal tumors,20 sarcoma,21 desmoid tumors,22 ovarian teratoma,23 and pancreatic tumors,1 which can lead to an unnecessary aggressive surgical approach or extensive extirpative surgery.

According to the clinical findings, the radiological appearance of gossypiboma varies and it is not specific. It may manifest as a cystic lesion with a spongiform appearance with mottled shadows as a bubble, concentric layering, or mottled mural calcifications.1,24,25

**FIGURE 1** CT scan showing gossypiboma located in the right upper quadrant of the abdomen
The preoperative diagnosis could not be certain; the correct preoperative diagnosis is made in about one-third of the cases.²⁴ It can be suspected based on the history of surgery and radiological findings, especially with a mass without any communication.

The standard treatment is laparotomy, surgical removal, and in some selected cases, laparoscopic and endoscopic removal can be performed.²⁶,²⁷ But prevention is the best course. Meticulous count of all surgical materials and all sponges should be counted at least twice before the operation, preconizing to use only sponges with a radiopaque marker. That is why after 1980, the surgical swabs were labeled with radiopaque markers to facilitate their detection.⁸,²⁵

The important point is the medicolegal aspect of gossypiboma, always taken as a human mistake. Too many risk factors have been reported for surgical sponges retained during the surgery, including long operation duration, emergency surgery, unstable patient condition, inexperienced staff, inadequate number of staff, omission of sponge count preoperatively, and postoperatively high body mass index.¹² The risk increases if there is a change in nursing staff during the procedure.¹

CONCLUSIONS
Gossypiboma is an unwanted and preventable complication that should be considered as a differential diagnosis for all mass lesions detected in the postoperative period. It is considered a serious medicolegal problem and, hence, should be prevented at all costs.

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CONFLICT OF INTEREST
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AUTHOR CONTRIBUTIONS
Debaibi Mehdi conceived the idea for the document and contributed to the writing and editing of the manuscript. Sghair Asma contributed to the writing and editing of the manuscript. Gabsi Sofien reviewed and edited the manuscript. Nejib Fatma contributed to the acquisition and conception of the manuscript. Sridi Azza reviewed and edited the manuscript. Chouchen Adnen contributed to the literature review, manuscript writing, editing, and review of the manuscript. All authors read and approved the final manuscript.

ETHICAL APPROVAL
Personal data have been respected. Published with the consent of the patient.

CONSENT
Written informed consent was obtained from the patient to publish this report in accordance with the journal’s patient consent policy.

DATA AVAILABILITY STATEMENT
Personal data of the patient were respected. No data are available for this submission.

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