



Idiopathic weight loss due to an entero-enteric fistula from a gossypiboma retained for 27 years

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ABSTRACT

Gossypiboma refers to a mass formed around surgical instruments or materials left in the body postoperatively. The occurrence of gossypibomas remains an important problem, despite improvements in surgical procedures and operating room facilities. The clinical presentation of gossypiboma can vary depending on the host response. This report describes a case of abdominal gossypiboma after splenectomy. A 48-year-old man who had undergone splenectomy 27 years ago was admitted to our clinic suffering from non-specific symptoms for 2 weeks. He was cachectic, but laboratory test results were normal. Abdominal ultrasonography and computed tomography revealed a mass in the left hypochondrium. An entero-enteric fistula and an encapsulated foreign body (surgical compress) were detected during an exploratory laparotomy, and the foreign body was removed. Preventing gossypibomas is very important because of their potential to create medico-legal problems and increase mortality and morbidity. Therefore, forgotten surgical material should be considered in all patients with a surgical history, and surgery should be performed carefully.

Keywords: Entero-enteric fistula, foreign body, gossypiboma, textiloma

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INTRODUCTION

The term gossypiboma (textiloma, cottonoid, gauzoma, and muslinoma) is used to describe the development of a mass around forgotten surgical materials, such as gauze pads or compresses. The incidence of gossypiboma is not precisely known (1, 2). Patients with gossypiboma may be asymptomatic or may present with non-specific symptoms. The clinical symptoms of gossypiboma can vary from mild discomfort, pain, malabsorption syndrome, chronic anemia, weight loss, or intermittent vomiting to severe pain, fever, generalized peritonitis, acute gastrointestinal bleeding, and bowel obstruction. Symptoms may occur up to 1 year after the initial surgery. A diagnosis of gossypiboma is usually made based on imaging results (1, 3). Here, we present a case of abdominal gossypiboma 27 years after a splenectomy.

CASE PRESENTATION

A 48-year-old man presented with fatigue, intermittent bilious vomiting, and abdominal colicky pain for 2 weeks. The patient had undergone a splenectomy 27 years ago due to blunt abdominal trauma. The patient had been followed by an internal medicine clinic due to chronic iron deficiency anemia and had been admitted to an emergency clinic several times for abdominal colicky pain and a 10-kg weight loss within the previous 3 months. A physical examination revealed cachexia and abdominal pain in the epigastric region. Laboratory test results were normal, except for moderate iron deficiency anemia. Abdominal ultrasonography (USG) revealed hypoperistaltic bowel loops and the presence of a hypoechoic mass in the left hypochondrium. Abdominal contrast-enhanced computed tomography (CECT) revealed a heterogeneous hyperechoic mass compressing the distal transverse colon externally, suggesting the presence of a foreign body or tumor (Figure 1). Results of upper digestive endoscopy and colonoscopy were normal.

The patient underwent an exploratory laparotomy. An entero-enteric fistula was detected between the proximal jejunum and the distal ileum, and an encapsulated granuloma had formed between the fistula and the distal transverse colon mesentery. This encapsulated mass was opened to reveal a foreign body (a 20×15×15 cm surgical compress). The intraluminal contents of the compress were occluding the lumen (Figure 2), and the foreign body was removed (Figure 3). The entero-enteric fistula was treated by removing a 15-cm segment of the jejunum and a 15-cm segment of the ileum, and the intestinal loops were end-to-end anastomosed. A nasogastric tube was pushed forward up into the duodenum, and a feeding tube was placed in the jejunum because the anastomosis between the jejunal loops was very close to the ligament of Treitz. The incision was sutured, and the abdomen was closed. The patient was discharged on postoperative day 8 after tolerating enteral nutrition and recovering. The feeding tube was removed surgically 1 month later. No complications occurred during follow-up, and the patient's weight returned to normal.

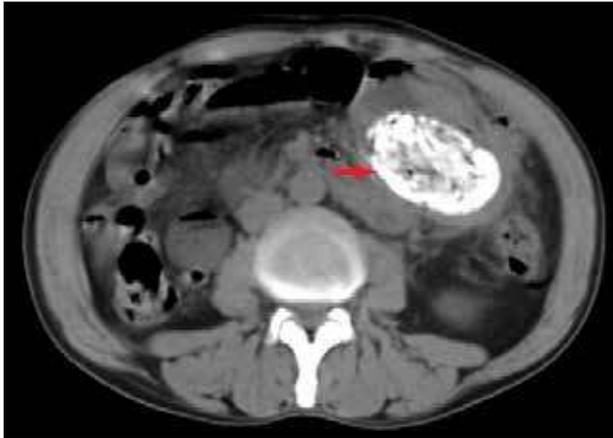


Figure 1. A CECT image showing intraluminal heterogeneous hyperchoic mass



Figure 2. Intraoperative image showing withdrawal of compress from the lumen of bowel loop



Figure 3. The retained surgical sponge

DISCUSSION

Gossypiboma remains an important medical condition, despite improvements in surgical procedures and operating room facilities. The true incidence of gossypiboma is not precisely known, but has been estimated to occur in 1 in 1,000 to 1 in 1,500 surgeries (4).

Several risk factors related to patients, the surgical procedure, and foreign body features, including emergency surgery, obesity, long operative period, inexperienced staff, inadequate number of staff, staff changes during the operation, unstable patient, and lack of a clearly defined material-count protocol, have been reported in cases of gossypiboma (5). Although swabs, towels, pads, and surgical instruments may be retained in the abdominal cavity, surgical gauze is the most frequently retained foreign body because it is commonly used and is small (6). Gawande et al. (7) reported surgical gauze as the cause of gossypiboma in 69% of cases and surgical instruments in 31% of cases. In our case, the patient underwent emergency surgery, including splenectomy, due to trauma, and the retained material turned out to be a surgical compress.

Patients may be asymptomatic or may present with non-specific symptoms. The clinical presentation of gossypiboma includes abdominal pain, vomiting, gastrointestinal bleeding, weight loss, and anemia, but can vary greatly depending on the type of host response and the location and size of the foreign body. Gossypiboma can present years after the initial surgery (8, 9). Surgical cotton material, including gauze pads and compresses, are inert and do not change in the body. However, foreign bodies can cause two types of reactions, such as a granuloma formation or an exudative reaction. A granuloma occurs due to an aseptic fibrous response, leading to adhesions and encapsulation, and generally has a quiet clinical period. An exudative reaction occurs due to an inflammatory response, leading to abscess formation and clinical symptoms during the early postoperative period (4). In some cases, foreign bodies migrate into the bowel lumen by eroding the bowel wall because of the pressure exerted. The most common parts of the bowel that are penetrated are the ileum and colon, although bowel penetration can occur in any part of the intestinal tract (10). Penetration and migration leads to perforation, formation of internal and external fistulas or an abscess, gastrointestinal obstruction, and bleeding (5). In our case, an internal fistula formed between the proximal jejunum and the distal ileum, in addition to the presence of an encapsulated granuloma. An aseptic fibrous response occurred in response to the surgical compress material, and our patient remained asymptomatic for 27 years after the initial surgery. The foreign body was detected during an evaluation for intermittent vomiting and extreme weight loss.

The diagnosis of gossypiboma is typically made using imaging results from simple X-ray, USG, CECT, or magnetic resonance imaging. A simple X-ray was highly significant for diagnosis in the present case, as surgical cotton is radiopaque. USG or CECT is useful for other foreign bodies or to confirm the diagnosis. While USG reveals a mass of mixed echogenicity with intense and sharp acoustic shadowing, CECT reveals a well-circumscribed mass and internal structures with a whirl-like appearance (9). The present case showed such characteristic CECT findings.

CONCLUSION

Preventing gossypiboma is very important because of the potential medico-legal problems and increased morbidity and mortality. Therefore, forgotten surgical materials should be considered in all patients with a surgical history. Surgical staff should not change during a surgical procedure, particularly

during an emergency surgery, and surgical instruments should be counted, if necessary. An intraoperative X-ray should be obtained when conflicting count results occur.

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