

Transmural migration of Gossypiboma presenting as Intestinal obstruction

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ABSTRACT

Gossypiboma or retained surgical sponge is rare but serious complication of surgery. It is a surgeon's nightmare with medicolegal complications. It amounts to medical negligence of the surgical team. Diagnosis is often delayed owing to nonspecific clinical symptoms and inconclusive imaging features. We report a case of a 20 year old woman who previously underwent caesarean section and presented to our hospital with features of intestinal obstruction due to Gossypiboma.

Keywords : Gossypiboma, ultrasound, intestinal obstruction

INTRODUCTION

Retention of sponges in the peritoneal cavity after surgery is an avoidable complication which unfortunately still occurs. Various methods including radio opaque markers have been used to minimize this occurrence or to ensure its early detection. Adherence to theatre protocol such as counting packs before and after surgery remains the most useful measure. Despite the rarity of the reporting of a retained surgical sponge, this occurrence appears to be encountered more commonly than generally is appreciated. The manifestations and complications of gossypibomas are so variable that diagnosis is difficult and patient morbidity is significant. Retained surgical foreign body has to be considered as a strong diagnostic possibility in postoperative patients presenting with unexplained symptoms such as pain and intestinal obstruction. Imaging diagnosis of gossypiboma is difficult and rare, our case was unique because initial diagnosis was made on ultrasound and confirmed by CT.

CASE REPORT

A 20 year old female patient came to our hospital with complaints of abdominal pain since ten days and multiple episodes of diarrhea and vomiting since two days. She had a history of caesarean section one month back. On clinical

examination she was having low grade fever and tender, palpable left iliac fossa mass. Haematological investigations revealed leucocytosis. Ultrasound abdomen and contrast enhanced CT were done and the diagnosis of gossypiboma or retained surgical sponge was made (Figure 1 and 2).

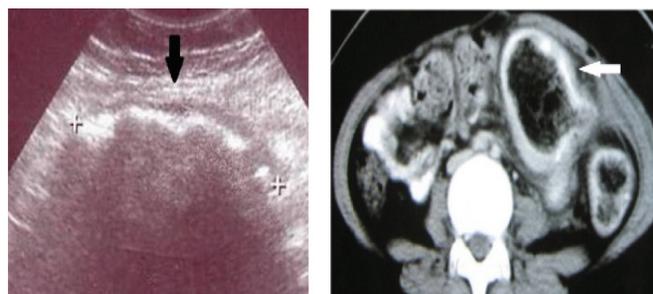


Fig 1- ULTRASOUND IMAGE Fig 2- AXIAL CONTRAST CT ABDOMEN IMAGE

Fig 1: Showing a well defined curvilinear mass with waveform acoustic shadowing in the region of tenderness. Possibility of retained foreign body was considered based upon these findings.

Fig 2: Showing a well-defined mass in the left iliac fossa with thick enhancing wall and central spongiform appearance due to multiple air specks.

Abdomen was opened by mid line incision and multiple small bowel loops seen adherent to sigmoid colon were separated. Locally dilated segment of ileum with tear was identified and Gossypiboma was found inside the lumen (Figure 3).

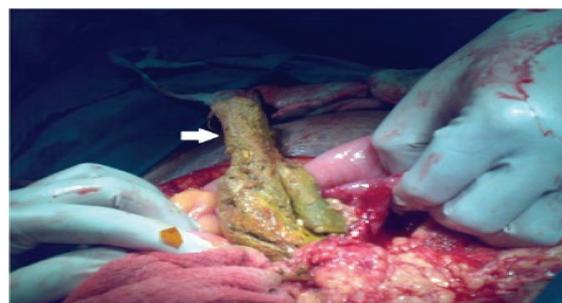


Fig 3-Intra-operative picture showing surgical sponge with adjacent inflammatory tissue.

The gossypiboma was removed and segmental resection of bowel along with mesentery and end to end anastomosis was done. Patient recovery was uneventful and was discharged after 3 weeks.

DISCUSSION

Gossypiboma is a term used to describe a mass of cotton matrix that is left behind in a body cavity during an operation. This is an uncommon surgical complication. Gossypibomas are most frequently found in the abdomen. Such foreign bodies can often mimic tumors or abscesses clinically or radiologically because they are surrounded by foreign body reaction. They are rarely reported because of medicolegal implications. The manifestations and complications of gossypibomas are so variable that diagnosis is difficult and patient morbidity is significant. Because of a low reporting rate due to medicolegal implications the actual incidence is difficult to estimate. It varies between 1 in 1,000- 1,500 intraabdominal procedures¹.

Clinical presentation may be acute or subacute. Patients can present with nonspecific abdominal pain and intestinal obstruction, a palpable mass, vomiting and abdominal distension. The diagnosis of gossypiboma may be difficult because it may mimic a benign or malignant soft tissue tumour in the abdomen and pelvis^{2,3}. Gossypiboma occurs in surgeries due to relatively small size and common usage of surgical sponges. Surgical sponges are the most commonly retained foreign body materials post surgery. Gossypibomas are most commonly found in the abdomen (56%), pelvis (18%), and thorax (11%).⁴

If the sponge contains a radiopaque marker, the diagnosis can be made easily on conventional radiography. In some cases radiographs of the abdomen can reveal a fine opacity and some mottled small air densities superimposed in that area⁵. Ultrasound features are usually a well-delineated mass containing a wavy internal echo with a hypoechoic ring and strong posterior acoustic shadowing.⁶. CT is the investigation of choice for detecting gossypibomas and possible complications. On CT, retained sponges are typically seen as a low density heterogeneous mass with an external high density wall and may show a whorled texture or a spongiform pattern with contained air bubbles on contrast enhanced CT.⁶ The spongiform pattern with air pockets is the most characteristic CT sign. On CT, Calcification of the mass wall may be observed.

In our case the presence of curvilinear pattern and air pockets in the mass was noted along with the peripheral enhancing wall, helped in diagnosis of gossypiboma. Presentation of gossypibomas can vary from immediate post surgery upto several decades after surgery.⁷ The risk of fistulization increases with increasing duration of foreign body retention. Without any apparent opening in the intestinal wall foreign bodies (e.g. surgical sponge) may completely migrate into the ileum.⁸

Universal precautionary measures, such as the practice of counting surgical sponges and instruments are undertaken to decrease the likelihood of retaining surgical devices. Surgical sponges marked with radiotracers also help in preventing retained foreign material. Radiologists should have a high index of suspicion for retained foreign bodies when examining postoperative patients.

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