

Gossypbioma: A Differential Diagnosis Of A Lump In The Abdomen

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Citation

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Abstract

'Gossypbioma' denotes a mass of cotton, retained in the body following surgery. It may be responsible for bizarre and varied complications or it may follow a silent course for months to years after original operation. USG and CT scan are the mainstay of the diagnosis. After diagnosis a gossypbioma need to be removed either by open surgery or percutaneous method. Case history of a 28 years old female presenting with lump abdomen following uterine myomectomy eight months back is being reported because of its unusual presentation. CT scan revealed an oval mass with spongiform pattern of gas bubbles within it leading to diagnosis of retained surgical sponge which was removed after reoperation which also necessitated the removal of approximately 3 feet of small gut lying adherent to the sponge.

INTRODUCTION

Gossypbiomas – retained cotton foreign body following surgery are not always reported owing to medico-legal reasons. But each such incidence upsets the patient and the surgeon. Although the real incidence is unknown, it has been reported as 1 in 100 to 3000 for all surgical interventions. ¹ The symptoms of obstruction, peritonitis, adhesions, fistulas, abscess formation or erosion into gastrointestinal tract, may lead to its detection. ² Development of a fistula to neighboring organs such as stomach, duodenum or intestine occurs infrequently. The longer is its retention time, the higher is the fistulization risk. ³ Sometimes, its non specific clinical symptoms may preclude an accurate diagnosis. ⁴ Plain skiagram of the abdomen can be helpful only when sponges have been impregnated with a radio-opaque marker. Ultrasonography (USG), computerized tomography (CT) and magnetic resonance imaging (MRI) are often needed to accurately diagnose a retained sponge. ^{5,6} Once diagnosed, it needs to be removed. Non-surgical approach such as percutaneous retrieval of foreign bodies is reported but with limited success. ⁷ Open surgery is the most commonly used method for removing them, especially from the abdomen because repair or resection of intestines may be required as was also needed in the present case. The present report describes a patient who had retained sponge following uterine myomectomy done earlier. The mass effect of the sponge on the small gut and its mesentery alongwith a lump in the abdomen warranted surgery which required resection

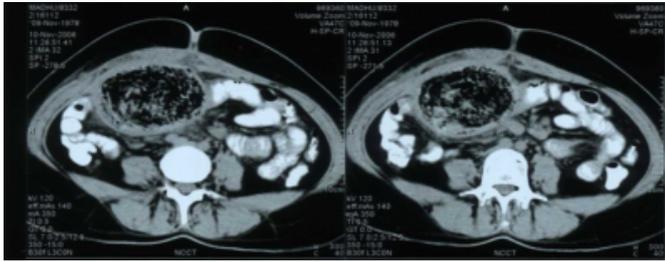
and reanastomosis of small gut along with its removal.

CASE REPORT

A 28 years old female was admitted with history of lump and recurrent pain abdomen associated with occasional vomiting and fever. There was previous history of operation for a uterine myoma by a midline incision eight months back. On examination, an intraperitoneal lump measuring 9x8 cms was palpable, occupying the umbilical, right lumbar and right iliac quadrants. Plain skiagram did not show any specific abnormality. Ultrasonography detected an oval mass of size 12x10x10cm with hypoechoic rim and echogenic centre. Non-contrast computed tomography (NCCT) revealed a large oval mass lesion with thick capsule and spongiform pattern of gas bubbles within it displacing adjacent bowel loops (Fig. 1). A diagnosis of retained surgical sponge was made.

Figure 1

Figure 1: Computerized tomography abdomen image revealing a large oval mass with thick capsule and spongiform pattern of gas bubbles within it.



Exploration confirmed a surgical sponge of size 25x14 cms lying into the peritoneal cavity pressing on jejunoileal area and its mesentery. The surgical sponge was removed and the involved gut was friable and oedematous, 3 feet of jejunoileal portion of gut resected and reanastomosis was done 10 cms proximal to ileocaecal junction. Peritoneal lavage was done and abdomen was closed after putting a drain. Postoperatively, patient developed wound sepsis and pus culture showed mixed flora. It was followed by burst abdomen which required resuturing. Histopathological examination of gut showed chronic inflammatory infiltrate with submucosal fibrosis suggestive of foreign body granulomatous reaction. Patient was discharged home after 4 weeks after operation in stable condition.

DISCUSSION

Surgical sponge often referred as gossypbioma is the commonest reported postoperative intra-abdominal retained foreign body and has been widely mentioned in the literature. ⁸ It is made of cotton which is an inert substance and does not stimulate any specific biochemical reaction. Pathologically two types of foreign body reactions occur due to sponge. ⁴ One is an aseptic fibrinous response that creates adhesions and encapsulation, resulting in a foreign body granuloma. This occurrence usually follows a rather silent clinical course. The other response is an exudative type that leads to abscess formation with or without secondary bacterial infection. The present case had foreign body granuloma type reaction so she had rather silent clinical course after first surgery and presented as lump abdomen.

The diagnosis of a retained surgical foreign body will continue to be a problem as long as nonabsorbable materials are used. It can easily be made on a plain radiograph if it has a radioopaque marker. The CT and USG appearances of retained surgical sponges are reported to be widely diverse. ⁶ Sonographically, retained surgical sponges are echogenic

and produce an intense and sharply delineated acoustic shadow. CT is the investigation of choice for a retained surgical sponge. Although the typical spongiform pattern with gas bubbles is the most characteristic CT sign for retained surgical sponges, another sign associated with the condition is an inhomogeneously dense mass with a capsule that shows marked enhancement after administration of contrast material. ⁶ In the present case CT scan showed a spongiform pattern of gas bubbles with a thick capsule.

Once gossypbioma is diagnosed, it should be removed. Surgery had been the mainstay in the removal of the foreign bodies for many years. However some alternative method like percutaneous extraction of foreign bodies have been described in the literature. ⁷ But such methods are of little value when there are dense adhesions between intraabdominal organs and retained foreign bodies, which may necessitate either repair or resection of gut as in the present case.

Besides many diagnostic and therapeutic difficulties, a gossypbioma has medicolegal implications. Presence of a foreign body can be easily proved and the surgeon may face charges of negligence. So prevention is the best treatment as in many other medical problems. Avoidance of leaving foreign bodies inside patient could be possible by implementation of following measures: 1) meticulous count of all surgical materials, 2) thorough exploration of the surgical site and four abdominal quadrants at the conclusion of the procedures and 3) routine use of surgical textile material impregnated with a radio-opaque marker can help in early detection if foreign body is left inside.

In summary, although gossypbioma is not commonly seen in clinical practice but it should be considered as differential diagnosis of lump abdomen in patients who underwent surgery previously. Once diagnosed by USG and /or CT scan, surgery should be performed as it may lead to complication which may require repair or resection of intestine.

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