

Laparoscopic management of gossypiboma

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Abstract. Gossypiboma is a mass lesion due to a retained surgical sponge surrounded by foreign body reaction. We report the laparoscopic management of gossypiboma after cesarean section for placenta previa.

A 29 year- old women presented with a history of emergency cesarean section for placenta previa, performed seven days ago. Abdominal computerized tomography scan showed a heterogeneous and low density mass, with peripheral calcifications. The patient was submitted to laparoscopic surgery. An aseptic plastic material was used to wrap for laparoscopic removal of gossypiboma.

Minimal invasive surgery for removal of gossypiboma is successful within a few weeks after the original operation as demonstrated in our case. However, the dissection technic is difficult and depends on an experienced laparoscopic surgeon.

Key words: Gossypiboma, cesarean section, laparoscopic management.

1. Introduction

Gossypiboma is a mass lesion due to a retained surgical sponge surrounded by foreign body reaction. It can cause serious morbidity and even mortality. Because it is not anticipated, it is frequently misdiagnosed and often unnecessary radical surgical procedures are performed (1-4). Gossypibomas occurs at a frequency of one per 1000-1500 abdominal operations (5). The majority of the cases described are provided by gynecological surgery rarely from cesareans (6). However, the actual incidence of gossypibomas is difficult to estimate because of underreporting.

Patients develop symptoms of abdominal pain, nausea, vomiting, anorexia and weight loss, resulting from obstruction or a malabsorption-type syndrome caused by multiple intestinal fistulas or intraluminal bacterial overgrowth (7). The diagnosis of gossypiboma and the second remedial surgical operation needed to rectify the medical problem can lead to start of a legal battle between the patient and the surgeon at fault. In our case, we report the laparoscopic management of gossypiboma after cesarean section for placenta previa.

2. Case report

A 29 year- old women presented with a history of emergency cesarean section for placenta previa, performed seven days ago. Post-operation, the patient had colicky abdominal pain, fever and vomiting without any features of bowel obstruction. On the first clinical examination of the patient, disseminated tenderness was noted. She was febrile to 39,1 °C. On vaginal examination, a normal leukorrhoea and tenderness of the cervix with movement were seen. Transvaginal and transabdominal sonographic examinations were performed and approximately 9cm wide mass lesion image was seen at the superior of the uterus. Laboratory investigations revealed increased white cell count (33.000/ mm³) and C- reactive protein (301mg/dL). Abdominal computerized tomography scan showed a heterogeneous and low density mass, with peripheral calcifications, measuring 9.5cm diameter (Figure 1). According to all of these signs the final diagnosis was gossypiboma. We used cefazolin and metronidazole for broad-spectrum antibiotherapy. The patient was then submitted to laparoscopy. During the procedure, dissection showed an uncapsulated structure. There was debris with minimal adhesions to surrounding sigmoid colon. After violation of uncapsulated mass and drainage of debris, a retained sponge was discovered. The mass lesion was separated from the surrounding tissues and excised globally. An aseptic plastic material was used to wrap for laparoscopic removal. Operation was uneventful. Postoperative 3th day, white cell

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Received: 20.04.2014
Accepted: 05.06.2014

count and C-reactive protein levels returned to normal values. The patient was discharged on the same day.

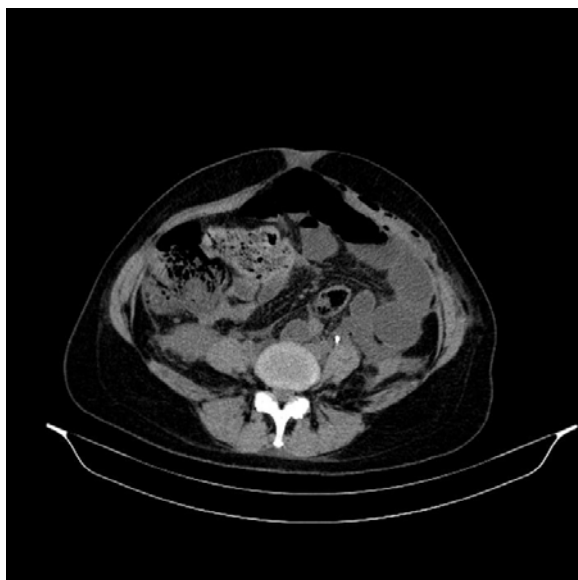


Fig. 1. Computerized tomography image of gossypiboma postoperative 7th day of cesarean section.

3. Discussion

Gossypibomas or retained foreign bodies following surgical interventions not only possess diagnostic and therapeutic dilemma but also have medicolegal implications. Reports of this surgical mishap are only the tip of an iceberg due to its medico-legal consequences and widespread criticisms (8). Although the actual incidence is unknown, it has been reported as 1 in 100-3000 for all surgical interventions and 1 in 1000-1500 for abdominal surgeries (9,10).

Gossypibomas may give rise two types of reactions, exudative leading to abscess formation or aseptic fibrinous reaction of foreign body granuloma formation (11,12). This reaction usually occurs early in the postoperative period and may involve secondary bacterial contamination, which results in various fistulas (13).

Concerning gossypiboma, prevention is preferred rather than treatment. Notwithstanding, there is no highly reliable prevention system. Counting sponges is a method based on staff communication during the surgery with only 77% sensibility (14).

Routine surgical postoperative X-ray (SPOX) constitutes an early detection system, but the need to incorporate a radiopaque marker and to expose the whole surgical field to maximize its efficacy limits (14). More recently, electronic dispositives based on barcode detection and other

technological adjuncts for counting sponges are being developed (14-16). None of these prevention systems are reliable when used alone (14).

A careful examination of a plain abdominal roentgenogram can be diagnostic. A whirl-like pattern has been described characteristic of retained sponges (17). Ultrasound usually shows a well delineated mass containing wavy internal echo with a hypo-echogenic rim and a strong posterior acousting shadowing (18). A computed tomography scan demonstrates a rounded mass with a dense central part and enhancing wall (19). On magnetic resonance imaging, a retained sponge is typically seen as a soft tissue mass with a thick, well defined capsule and a whorled internal configuration on T2-weighted imaging (20). In our case we used computed tomography for the diagnosis of gossypiboma seven days after primer surgery.

Nonsurgical approaches, such as percutaneous retrieval of foreign bodies are reported with limited success (21). The definitive modalities are removed either exploratory surgery or laparoscopy. Exploratory open surgery is the most common used method for removal. Especially, repair or resection of the intestines may be required in accompaniment with open abdominal surgery (22).

Minimal invasive surgery for removal of gossypiboma is successful within a few weeks after the original operation as demonstrated in our case (23-25). However, the dissection technic is difficult and depends on an experienced laparoscopic surgeon.

In conclusion, this unwanted situation is entirely preventable. The services provided by a doctor are the noblest of all. The surgeon should always remain vigilant and cautious, as the damage done once, is done forever. Hence, prevention always remains better than cure.

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