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Gossypiboma –A Surgeons Nightmare

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Case Report

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Abstract: Gossypiboma or textiloma is used to describe a retained surgical swab in the body after an operation. This increases morbidity and mortality of the patient, cost of treatment, and medico-legal issues. A case of a 50-year-old woman is reported, who was referred from periphery with acute abdomen. She had a surgical history of abdominal hysterectomy performed 5 years back. Ovarian cyst was suspected on clinical examination. Imaging studies kept a possibility of retained surgical mop. Laparotomy revealed an encysted mass, filled with pus and a surgical swab/mop in the centre, further confirming the diagnosis of gossypiboma.
Keywords: Gossypiboma , Textiloma , Forgotten foreign body in abdomen, Lump in abdomen.

INTRODUCTION

Gossypiboma, term is derived from the combination of Latin words “gossypium” (cotton) and the Swahilli “boma” (place of concealment). Gossypiboma is a term used to describe a mass within the body that comprises a cotton matrix surrounded by a foreign body reaction. Another term, “textiloma” which originated from the “textilis” - weave in Latin and “oma” - disease, tumor, swelling in Greek. It refers both to a fabric body involuntarily left in the patient during surgery and the reactions secondary to its presence in the body. Surgical mop retained in the abdominal cavity following surgery is a serious, but avoidable complication [1].

Two usual responses to retained mops are exudative inflammatory reaction with formation of abscess, or aseptic fibrotic reaction to develop a mass that leads to future complications. The actual incidence of gossypiboma is difficult to determine, possibly due to a reluctance to report occurrences arising from fear of legal repercussions, but retained surgical sponges is reported to occur once in every 3000 to 5000 abdominal operations[2] and are most frequently discovered in the abdomen[1].The incidence of retained foreign bodies following surgery has a reported rate of 0.01% to 0.001%, of which gossypibomas make up 80% of cases[3].

CASE REPORT

A 50-year-old woman was referred with complains of acute abdomen and distention of lower abdomen. There was a history of abdominal hysterectomy with bilateral salphingo oophorectomy for menorrahagia due to fibroid uterus. Her general examinations and laboratory parameters were within normal limits. On abdominal examination, a pfannenstiel scar was present; a large midline, round, non-tender, cystic mass of ~10x10 cm size with restricted mobility and smooth surface was felt in infra-umbilical region. Patient was investigated with provisional diagnosis of ovarian cyst with torsion. Ultra-sonography and CT scan of abdomen suspected a forgotten surgical gauze mop with suture material attached to it. (Fig 1) She underwent exploratory laparotomy under general anesthesia with suspected diagnosis of left ovarian cyst.

Abdomen was opened with low midline incision. An encysted mass of 10x10 cms was seen lying intraperitoneal, between loops of the small intestine. All precautions were taken to prevent rupture of the cyst. Due to multiple adhesions and attempts of its separation, the cystic mass got ruptured with expulsion of yellow, thick pus in which a surgical gauze mop was found. Pus samples were sent in a sterile container for culture and sensitivity. The sponge was removed carefully from its attachments without any injury to adherent bowel loops**.** (Fig 2) A thorough peritoneal lavage was given. The abdomen was closed with all precautions and counts of sponges and instruments. The culture and sensitivity of pus was sterile. Patient had dehiscence of wound on sixth postoperative day, for which she required re suturing.

Patient was discharged from hospital after 25 days of hospital stay.

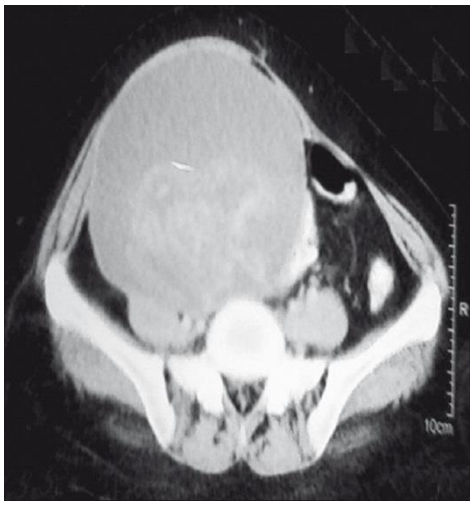

Fig-1: **CTabdomen showing big pelvic mass**

Fig-2: **Showing encysted surgical mop in the peritoneal cavity**

DISCUSSION

An acute surgical abdomen is one of those cases in which a patient needs emergent evaluation, and likely emergency operative intervention. The causes can be mesenteric ischemia, appendicitis, cholecystitis, diverticulitis, bowel obstruction etc. Gynaecological causes like torsion of ovarian cyst, tubo-ovarian mass, intra-cystic haemorrhage, degenerations in the fibroids have to be kept in mind during evaluation. An adult patient with an acute abdomen generally appears ill and has abnormal findings on physical examination. There can be upper and lower gastrointestinal signs and symptoms with signs of peritonitis. Management includes conservative treatment to surgical removal of definitive cause.

Gossypiboma cases generally have sub-acute or chronic presentation that is different from rest of the cases of acute abdomen. This case is an important pearl to revisit the gossypiboma/retained postoperative foreign body (RFP). The gossypiboma cases can leads to embarrassment, humiliation, job loss, and law suit worldwide. It is difficult to recognize a gossypiboma by using radiological screening, if the sponge does not have any radiological marker on itself, because the cotton can simulate hematoma, granulomatous process, abscess formation, cystic masses or neoplasm.

The possibility of a retained foreign body should be in the differential diagnosis of any postoperative patient who presents with pain, infection, or palpable mass. The low index of suspicion is due to rarity of the condition and latency in the manifestation. If the diagnosis is made early, laparoscopic retrieval may be feasible.

The possible causes of sponge retention are emergency surgery, unexpected change in the surgical procedure, disorganization, hurried sponge counts, long operations, unstable patient condition, inexperienced staff, inadequate staff numbers, and obesity. Most cases occurred when the sponge count was falsely pronounced correct at the end of surgery. Gossypiboma most commonly occurs after gynecological and upper abdominal emergency surgical procedures, but it may also follow thoracic, orthopedic, urological, and neurosurgical procedures. Because the symptoms of gossypiboma are usually nonspecific and may appear years after surgery, the diagnosis of gossypiboma usually comes from imaging studies and a high index of suspicion. The clinical presentation of gossypiboma is variable and depends on the location of the sponge and the type of reaction.

There are two types of foreign body reactions in pathology: an exudates reaction leading to abscess formation and chronic internal or external fistula formation. Another is an aseptic fibrinous reaction resulting in adhesion, encapsulation, and eventual formation of granuloma. Common symptoms and signs of gossypiboma are abdominal distension, ileus, tenesmus, pain, palpable mass, diarrhea, abscess, and fistula formation, nausea, vomiting, anorexia, and weight loss resulting from obstruction or a malabsorption type syndrome caused by the multiple intestinal fistulas or intra-luminal bacterial overgrowth [3].

The most impressive imaging finding of gossypiboma is the curved or banded radio-opaque lines on plain radiograph. The ultrasound feature is usually a well-defined mass containing wavy internal echogenic focus with a hypoechoic rim and a strong posterior shadow. On CT, a gossypiboma may manifest as a

cystic lesion with internal spongiform appearance with mottled shadows as bubbles, hyperdense capsule, concentric layering, and mottled shadows as bubbles or mottled mural calcifications. Magnetic resonance imaging (MRI) features of gossypiboma in the abdomen and pelvis, which include the delineation of a well-defined mass with a peripheral wall of low signal intensity on T1- and T2-weighted imaging, with whorled stripes seen in the central portion and peripheral wall enhancement after intravenous gadolinium administration on T1-weighted imaging. Particularly, chronic cases do not show specific clinical and radiological signs for differential diagnosis. It should be included in the differential diagnosis of soft-tissue masses detected in patients with a history of a prior operation [3].

Gossypiboma is a preventable condition. Sponge count at various stages of surgery can definitely avoid such a complication. This method was codified into recommended guidelines in the 1970s by the Association of peri-operative registered nurses [4]. Four separate counts are recommended: the first when instruments and sponges are first unpackaged and set up, a second before the beginning of the surgical procedure, a third as closure begins, and a final count during final skin closure[5]. Similar guidelines have been recommended by the American College of Surgeons and the Joint Commission [6]. In developed countries, surgical sponges contain radiopaque material which can be easily identified in radiographic and CT images, facilitating detection [1]. In the United States, radiopaque threads impregnated into surgical gauzes were first introduced in 1929 and were in common use by about 1940 [7].

CONCLUSION

Gossypiboma is an uncommon and avoidable condition. Diagnosis is often difficult .High degree of suspicion can help in diagnosis. Modern imaging techniques have great role in arriving at correct diagnosis. It is more likely to occur during emergency surgeries and when performed by less experienced surgeon. It has medico-legal importance. A strict adherence to surgical safety protocol can prevent its occurrence.

REFERENCES

1. Kim HS, Chung TS, Suh SH, Kim SY. MR imaging findings of paravertebral gossypiboma. American journal of neuroradiology. 2007 Apr 1;28(4):709-13.
2. Kiernan F, Joyce M, Byrnes CK, O'Grady H, Keane FB, Neary P. Gossypiboma: a case report and review of the literature. Irish journal of medical science. 2008 Dec 1;177(4):389-91.
3. Manzella A, Filho PB, Albuquerque E, Farias F, Kaercher J. Imaging of gossypibomas: pictorial review. American journal of roentgenology. 2009 Dec;193(6_supplement):S94-101.
4. AORN Recommended Practices Committee. Recommended practices for sponge, sharps, and instrument counts. Association of Operating Room Nurses. AORN Journal. 2006 Feb 1;83(2):418.
5. Kaiser CW, Friedman S, Spurling KP, Slowick T, Kaiser HA. The retained surgical sponge. Annals of surgery. 1996 Jul;224(1):79.
6. Gibbs VC, Coakley FD, Reines HD. Preventable errors in the operating room: retained foreign bodies after surgery—part I. Current problems in surgery. 2007 May 1;44(5):281-337.
7. Shyung LR, Chang WH, Lin SC, Shih SC, Kao CR, Chou SY. Report of gossypiboma from the standpoint in medicine and law. World Journal of Gastroenterology: WJG. 2005 Feb 28;11(8):1248.