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LAPAROSCOPIC MANAGEMENT OF GOSSYPIBOMA MASQUERADING AS AN OVARIAN TUMOUR

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Case Report

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Short Title: Laparoscopic Management of Gossypiboma

ABSTRACT

Background
Gossypiboma refers to pseudotumour composed of non – absorbable surgical material with a cotton matrix due to inadvertent retention in the body following surgery. The implications for both the surgeon (in the doctrine of res ipsa loquitor is a medical negligence) and the patient are grave. It is a rare but a preventable surgical complication.

The case
This is a case of 32 years old multiparous women with a history of previous three cesareans and sterilization who presented with non-specific abdominal pain. Ultrasound suggestive of ovarian dermoid and on laparoscopy it was found to be a gossypiboma or textilloma.

Conclusion
This case is reported to increase awareness of the phenomenon of gossypiboma, to practice more vigilance during surgeries, as the incidence of gossypiboma is more than reported anywhere because of fear of litigation, and underreporting.

Precis

This case is reported to increase awareness of the phenomenon of gossypiboma, to practice more vigilance during surgeries, as the incidence of gossypiboma is more than reported anywhere because of fear of litigation, and underreporting.

Teaching Points

- Meticulous count of all surgical materials and instruments pre and post surgery by both the nursing staff and the surgeon/assistant.
- Routine use of surgical textile material impregnated with a radiopaque marker
- Thorough exploration of the abdominal quadrants and surgical site prior to abdominal closure
- In emergency cases and when multiple teams are involved, only one person should be made responsible for the swab and instrument counts.

INTRODUCTION

A surgical sponge is the most common retained iatrogenic foreign body. The condition is referred to as gossypiboma or textiloma, derived from the Latin word gossypium (cotton) and Swahili boma (place of concealment) [1]. The retained surgical sponge can either trigger an aseptic fibrinous response due to foreign body granuloma or can cause exudative reaction leading to formation of an abscess [2]. The exact incidence is not known as these cases are seldom reported due to medico legal implications [3]. Such foreign bodies can mimic as an abscess or a tumour leading to a diagnostic dilemma. This condition can lead to significant morbidity due to dense intra-abdominal bowel adhesions and extensive surgery. The higher incidence of textillomas is found in emergency surgeries, when multiple surgical teams are involved, huge intra-operative bleeds, unexpected intra-operative findings, and incorrect counts [4] Even after introduction of checklists and other precautions, it happens. It can have variable presentation, such as abscess, sepsis, tumour, and also can be asymptomatic for years together[5].

CASE REPORT

A 32yr old multiparous woman reported to our outpatient department with chief complaints of irregular menstrual cycles and non-specific abdominal pain for past few months. The only significant past history being three previous cesarean sections. And last cesarean was done 7 years back. She did not have any problems for last 7 years and recently started having non-specific dull aching pain. On examination a cystic lower abdominal non-tense and non-tender mass with minimal side to side mobility was felt separately from the uterus. Ultra-sonogram revealed a right cystic lesion 9.4x5.6 cm with features suggestive of a dermoid cyst. Tumour markers done were within normal limits. Hence a working diagnosis of a dermoid cyst was made with no further higher imaging and patient was taken up for laparoscopic ovarian cystectomy. Three port laparoscopy was done (10 mm port supraumbilical and two 5mm ports left lateral) and following intraoperative findings were noted – 1) Uterus was adherent to anterior abdominal wall, 2) Right tube and ovary not visualized, 3) Left ovary appeared normal, 4) The circumscribed mass in anterolateral abdominal wall in question was a tense encapsulated cystic mass 10x12x8cm densely adhered to omentum and anterior abdominal wall. During the dissection of mass from omentum, pus, fat and strands of threads were noted. On further exploration, it was found to be a foreign body (surgical mop as its content). The mass was resected and retrieved using an endobag, followed by thorough peritoneal lavage. Intra-peritoneal drain kept. No intra-operative complications such as bowel injury were noted. Post operative period was uneventful and the patient was discharged after covering with broad spectrum parenteral antibiotics after two days.

This is a retrospective case report and patient's informed consent was taken for use of pictures for publication. This does not need IRB approval.

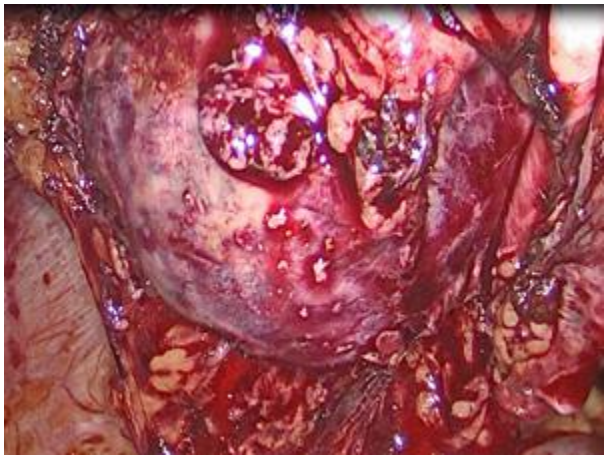

Figure 1*: Mass on laparoscopy which was reported as dermoid cyst on ultrasound*

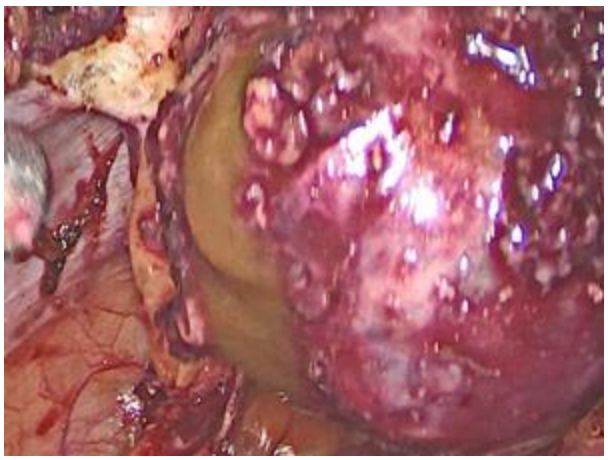

Figure 2*: Yellowish discharge from mass simulating fat content of dermoid*

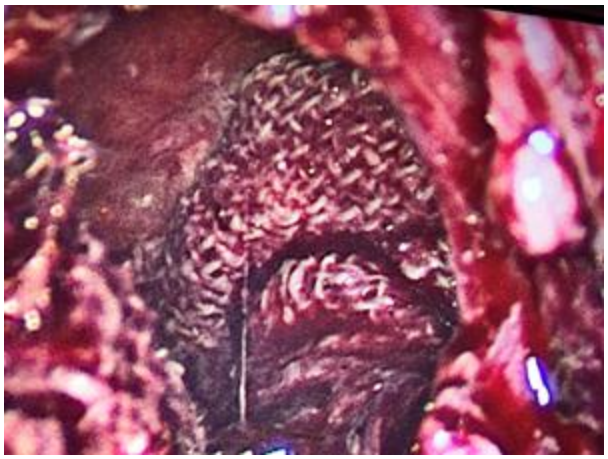

Figure 3*: Sponge seen on opening the gossypiboma*

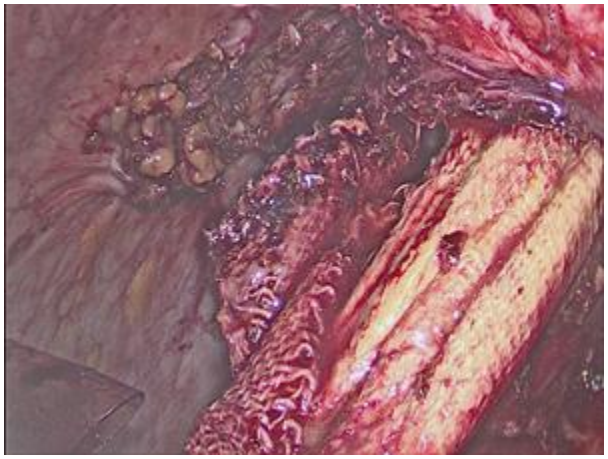

Figure 4*: Sponge being removed from the mass*

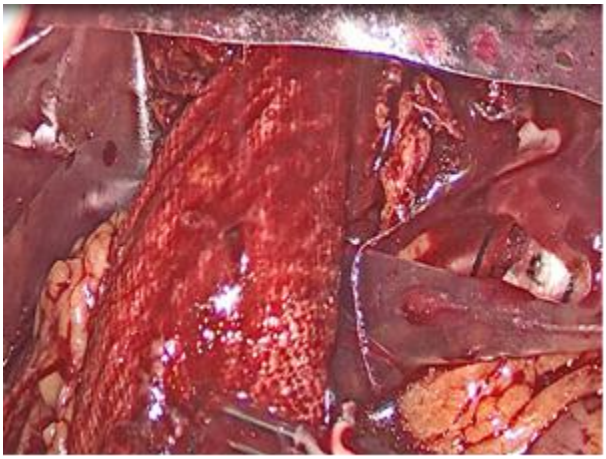

Figure 5*: Retrieving the sponge in an endobag*

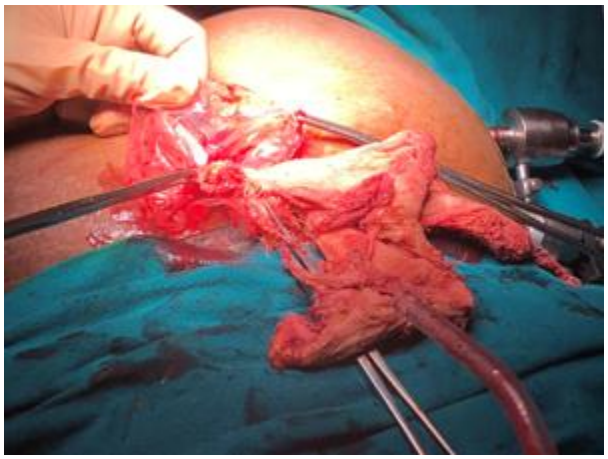

Figure 6*: Sponge retrieved in an endobag through 10 mm port*

DISCUSSION

Gossypiboma has varied presentation ranging from vague abdominal pain/mass to intestinal obstruction or fistula. The mass causes constant pressure on bowel loops leading to necrosis of intestinal wall and further eroding into bowel lumen causing obstruction or fistula[6]. In literature few cases have been reported that it can remain in dormant stage for years. Significant iatrogenic risk factors reported in the review of literature include non-elective surgeries, inexperienced or inadequate operating team or nursing staff, poor communication or change in surgical team and multiple surgical team involvement. Patient related factor responsible is obesity [6, 7]. The investigation of choice is a computed tomography scan. A CT Scan usually describes a whorl like appearance with trapped air bubbles, round mass with a dense central region and an enhancing wall or cystic mass with in folded densities [8]. In certain long-standing cases it may lead to a diagnostic dilemma in distinguishing from an intra-abdominal abscess. Other investigations such as MRI are inconclusive as the radio opaque marker is neither magnetic nor paramagnetic. Diagnosis can be missed if the marker is distorted by twisting, folding or disintegration over a period of time. The use of radiofrequency identification system holds hope for application in this field in near future. Other modalities under trial are bar coded sponges and usage of an intra operative scanner [9]. Use of checklists and thorough counting by the scrub nurse and surgeons may help.

Percutaneous radiological retrieval of foreign bodies such as superficially located sewing needles, angiographic guide wire fragment, pelvic drain and bullet fragments has been attempted in few cases to prevent anesthesia related complications, and to avoid extensive surgery and cost involved. Laparotomy remains as the most reliable method for removal of intra abdominal foreign bodies, due to expected dense adhesions between intra abdominal organs and fistula between the cavity containing the foreign body and gastrointestinal tract. In our case, with surgical expertise we were able to dissect the dense adhesions and retrieve the mop with a minimally invasive surgery (laparoscopy) and no complication such as intestinal perforation occurred.

CONCLUSION

Gossypiboma should be included as a differential diagnosis for patient presenting with soft tissue mass and with a prior history of abdominal surgery. It can be avoided by implementation of these measures: 1) Meticulous count of all surgical materials and instruments pre and post surgery by both the nursing staff and the surgeon/assistant. 2) Routine use of surgical textile material impregnated with a radiopaque marker 3) Thorough exploration of the abdominal quadrants and surgical site prior to abdominal closure 4) In emergency cases and when multiple teams are involved, only one person should be made responsible for the swab and instrument counts.

DECLARATION OF CONFLICTING INTEREST

The authors have no conflicts of interest (political, personal, religious, ideological, academic, intellectual, commercial or any other) to declare in relation to this manuscript.

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