



## An Asymptomatic Gossypiboma: A Case Report

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### ABSTRACT

*Gossypiboma is a term used to denote a mass of cotton material, usually, gauze, sponges and towels, inadvertently left in the body cavity at the end of a surgical operation<sup>[1],[2]</sup> Presenting here, the case of a 27 year old female who was operated for open cholecystectomy before 2 months and presented with a small sinus at the lateral end of her scar. A firm lump was palpated in right hypochondrium. Retained foreign body was detected radiologically and visualized by gastroscopy, and confirmed after laparotomy. Such retained foreign body should be considered as a differential diagnosis in any patient presenting with pain in abdomen, infection over suture line or palpable mass.*

**Keywords-** *Gossypiboma, retained foreign body, missing sponge, surgical complication*

### INTRODUCTION

The term is derived from a combination of Latin words 'gossypium' (cotton) and Swahili word 'boma' (place of concealment)<sup>[3]</sup>. It is a rare surgical complication but can cause significant morbidity and mortality. Gossypiboma was first described by Wilson in 1881.<sup>[4]</sup> Most gossypiboma cases are discovered during the first few days after surgery; however, they may remain undetected for many years. Two usual responses lead to the detection of a retained sponge. The first type is an exudative inflammatory reaction with the formation

of an abscess and usually leads to early detection and surgical removal. The second type is aseptic with a fibrotic reaction to the cotton material and development of a mass.<sup>[5]</sup> In the abdomen the sponge can be surrounded by omentum and intestines, which attempt to encapsulate it. The exerted pressure and irritation on the bowel loops can lead to necrosis of the intestinal wall and the sponge erodes or entirely into the lumen of the bowel. This process can lead to obstruction or fistula. While it may remain asymptomatic; it can present in a wide range of clinical statuses such as

abdominal pain, nausea, vomiting, tenesmus, diarrhea, gastrointestinal hemorrhage, fistula formation, intestinal obstruction, gastric outlet obstruction, transmural luminal migration, visceral perforation, abscess or sepsis.<sup>[2]</sup> Patients presenting with such symptoms following a history of abdominal surgery should be evaluated radiologically, keeping in mind a differential diagnosis of retained foreign body. Imaging modalities including plain radiography, ultrasonography (USG), computed tomography (CT), and magnetic resonance imaging (MRI) may help to have exact diagnosis. Surgery is the recommended treatment option in these cases.

### PATIENT PRESENTATION

A 26 year old female was operated on 17th may 2016 for open cholecystectomy near her native village. However, post operatively, she was not relieved of her earlier symptoms, which were pain in right upper part of abdomen. She was advised ultrasonography on 5th july 2016, which confirmed post cholecystectomy status, but showed a large hypoechoic area with acoustic shadowing in epigastric region. Later on she developed a small opening in the lateral end of the scar site with yellowish green discharge. There were no episodes of fever, vomiting, altered bowel habits or abdominal distension. The only complaint, apart from the discharge was a dull aching pain was present in the right hypochondrium. Patient presented with these complaints in our OPD on 27<sup>th</sup> june, 2016. On clinical examination, she was found to be afebrile, with normal vitals. Systemic examination revealed no significant abnormality. Per abdomen, she was found to have a small opening at the lateral end of her cholecystectomy scar having a yellowish, watery discharge. On palpation, a firm lump was palpated just below the scar. There was no tenderness or any signs of inflammation. The following radiological investigations were performed

Xray abdomen erect- No significant abnormality seen

X ray chest Posteroanterior view- No significant abnormality seen

Ultrasonography of Abdomen and Pelvis dated 27<sup>th</sup>july, 2016 – It revealed a sinus of size 3.5cm x 0.5 cm with 1 cm collection in anterior abdominal wall and a hyperechoic area noted deep to the operated site suggestive of foreign body.

Contrast Enhanced Computed Tomography scan of abdomen and pelvis dated 2<sup>nd</sup> August 2016 which was suggestive of a foreign body in the antrum of stomach with extensive inflammatory changes in sub-hepatic region

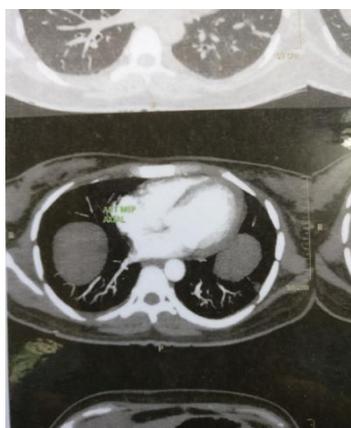
A psychiatric evaluation was done on 1<sup>st</sup> August 2016 to rule out abnormal eating habits or psychiatric condition which revealed normal mental status and no abnormal eating habit. Patient was planned for Gastroscopy in view of CT scan findings. Gastroscopy done on 3<sup>rd</sup> August 2016 revealed a whitish stranded foreign body in the stomach was visualized and scope couldnot be negotiated beyond it.

Based on the radiological and gastroscopic findings, the patient was posted for laparotomy and removal the foreign body on 8<sup>th</sup> August 2016. A mop was seen adhered to stomach and liver. It was subsequently removed completely and it showed a perforation in the stomach wall of approximately 3x3 cm along the lesser curvature. Ryle's tube was guided across the perforation, over a finger, into the duodenum through pylorus. The defect was closed primarily using interrupted Silk 2-0 and protected by a patch of omentum. The repair was checked for any leaks. Abdominal cavity was washed multiple times with warm saline, abdominal drains were kept in subhepatic space and pelvis and abdomen was closed in layers.

Post operatively the patient was kept nil by mouth till post operative day 5. Drain output and Ryle's tube output was monitored for quantity and colour. She was started on oral sips, followed by liquid diet on post operative day 6. After she tolerated it well and there was no change in drain color, the abdominal drains were removed and patient was started on full diet on post operative day 7.

Sutures were removed on post operative day 10.

CT scan done on post operative day 11 revealed no residual foreign body. The patient was discharged on post operative day 12 on full diet with stable vitals.



**Figure 1-** Computerised Tomography scan of the foreign body



**Figure 2-** Endoscopic view of the mop fistulating into stomach



**Figure 3-** Laparotomy showing the mop fistulating into stomach



**Figure 4-** The removed mop

## DISCUSSION

The diagnosis of a retained foreign body must be considered in a patient who has unexplained post operative pain, infection or a palpable mass. The significant risk factors according to a study in *New England Journal of Medicine* for the same are emergency nature of the surgery, a sudden change in procedure and BMI. Counting of mops is a non significant risk factor in the multivariate model.<sup>[6]</sup> Prevention of a retained intra-abdominal foreign body is by carefully checking the cavity for any retained mops, and careful counting of the mops and instruments. A new technique for prevention of such a catastrophe is electronic tagging of the surgical sponges<sup>[7]</sup>

Patient presentation can be either with bowel fistulas, or with obstruction, tenesmus, vomiting, gastrointestinal hemorrhage, perforation, abscess or sepsis.<sup>[8]</sup> Rarely, patient can be asymptomatic, with the only complaints of non healing of surgical scar. Detection of the retained foreign body can be done by Computerized Tomography (CT scan) or Magnetic Resonance Imaging (MRI). CT findings of a sponge usually describe a rounded mass with a dense central part and an enhancing wall. Other features of retained sponges or towels include a whorl-like appearance with trapped air bubbles and cystic masses with infolded densities. MRI features can be confusing because the radiopaque marker is not magnetic or paramagnetic so is not visible. [9] Detection of retained foreign body on intra-operative or post operative radiographs can be tricky since the interpretation is varied, and often the radio-opaque marker is twisted or misinterpreted as calcifications, clips or intestinal contrast material.<sup>[9]</sup>

The usual treatment is removal, either by open or laparoscopic means.<sup>[10]</sup> In case of small needles or surgical item, the removal may sometimes cause more complications than retention. In this case, removal is not recommended. However, this course is rarely recommended in case of a retained sponge, where surgical removal is always the mainstay of treatment.<sup>[9]</sup>

**CONCLUSIONS**

The authors conclude that careful counting of mops, especially in emergency cases or prolonged surgeries, along with careful checking of abdominal cavity before closure should be carried out, especially in a country like India where many centres do not have radiofrequency or bar coded sponges. Also, all cases of unexplained post operative abdominal pain or non healing of scar should be thoroughly examined since gossypiboma can present without any symptoms of acute abdomen.

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