

Unusual Cause of Intractable Vomiting in A Patient After Open Cholecystectomy

*Jagdeep Chugh**, *Jyoti Chugh***, *Praveen Sharma****

Abstract

Gossypiboma or textiloma is a rare but very unfortunate event of surgery. It refers to a retained foreign body (mostly gauze piece) at the end of an operation, mostly abdominal, but sometimes in thoracic operation¹. Gossypiboma is derived from a Latin word "gossypium" (cotton) and the Swahili "boma" (place of concealment)². Clinical examination and radiological findings may sometimes mislead the physician and these are often mistaken as malignancy or abscess³. We present a patient with recurrent vomiting which was non-bilious accompanied with weight loss for the last 30 days. There was no significant past history except an open cholecystectomy 5 months back. Upper gastrointestinal endoscopy revealed a surgical sponge in the duodenum which was retrieved successfully.

Key words: *Surgical gauze; gossypiboma; textiloma.*

Case report

A 29-year-old lady was admitted with complaints of recurrent vomiting, intermittent with bilious content for the last 30 days which had worsened over the last one week with increased frequency (5 to 6 times per day), amount and contained more undigested food with less bilious contents compared to earlier vomitus. She had pain in the abdomen which was continuous with intermittent exacerbation, located at epigastrium and right hypochondriac region. Pain used to increase after food and reduced after vomiting, the severity of pain had also increased. She was taking treatment from elsewhere before coming to us and was treated symptomatically with antiemetics, antispasmodics, and proton pump inhibitors without any relief. She only had a chest X-ray with her which it was normal. Her haemoglobin was 13 gm% with total leucocytes count (TLC) of 11,000 per cum/ml, and platelets were normal. The pain and vomiting were worsening gradually. She had lost 6 kg of weight over one month. There was no history of fever, cough, urinary complaints, and had a normal menstrual cycle.

Past history

She had upper abdominal pain five months back which was diagnosed as gall stone disease with thickened gall bladder wall, suggestive of cholecystitis. She was admitted in a government hospital and open cholecystectomy was done but reason for doing open cholecystectomy was not known to the patient. Post-surgery period was uneventful

with no history of drain placement. She was discharged after 4 days of admission in a stable condition.

She remained stable for 4 months. She had then vomiting and pain abdomen again and for this she visited the local practitioner. When she did not improve, she consulted us. On examination she was conscious, co-operative, and her vitals were normal. She was mildly dehydrated. General examination was also normal. No icterus, pallor, clubbing, lymphadenopathy were seen. Cardio-respiratory examination was also normal. Abdomen was soft and skin over the abdomen was normal with no visible peristalsis. Fullness was present in the epigastrium with mild tenderness in epigastrium and right hypochondrium and succussion splash was present, suggestive of gastric outlet obstruction. No other organ was palpable. Bowel sounds were sluggish in all the four quadrants. Initial assessment was suggestive of gastric outlet obstruction. She was treated with intravenous hydration and supportive care was started.

Investigations revealed: Hb - 12.2 gm%, TLC - 9,500 per cum/ml, platelet count - normal. Blood sugar - 92 mg%, blood urea - 17 mg/dl, creatinine - 1.0 mg/dl, electrolytes - normal, urine routine - normal, total S. bilirubin 1.3 mg/dl, conjugated - 0.8, serum alkaline phosphatase was 2,000 IU/L, SGOT - 260 U/L, SGPT - 265 U/L, amylase - normal. Patient had repeated vomiting and gastric succussion splash could be elicited at the time of examination so X-ray abdomen was done (erect and supine) (Fig. 1): there were no air-fluid levels but there was a linear string like radio-opaque shadow, the nature of which was not clear. Blood culture at the time of admission

Senior Consultant in Medicine, **Senior Consultant in Gynaecology, Satyam Medical Centre and Fortis Hospital, Shalimar Bagh, Delhi - 110 009, *Senior Consultant Gastroenterology, Sir Ganga Ram Hospital and Satyam Medical Centre, Shalimar Bagh, Delhi - 110 009.*

Corresponding Author: *Dr Jagdeep Chugh, Senior Consultant Medicine, Satyam Medical Centre and Fortis Hospital, Shalimar Bagh, Delhi - 110 009. Phone: 9899136000, E-mail: jagdeepchugh@yahoo.com.*

was normal. Ultrasound abdomen was done. It showed mildly dilated CBD with no dilated intrahepatic biliary radicals or any common bile duct stones and a hypoechoic area around the pancreas. The patient had a high alkaline phosphatase and transaminitis so we thought of a retained CBD stone. However, our patient presented with recurrent vomiting as the presenting complaint and the X-ray abdomen which revealed a linear metallic foreign body. Ultrasound abdomen showed no intrahepatic biliary dilatation so a consensus decision was made to go for CECT abdomen rather than MRI and MRCP in this patient.



Fig. 1: X-ray abdomen (erect).

In view of the above reports, gastroenterologist and surgeon



Fig. 2: CECT abdomen.

opinion was taken for repeated vomiting and linear shadow in X-ray abdomen. Possibility of some foreign body was considered. It revealed mildly dilated CBD with a normal pancreas. Portal vein was normal in caliber. There was significant dilatation and thickening of 2nd and 3rd part of the duodenum, up to the duodeno-jejunal flexure with presence of food residues and metallic prosthesis, probably clip or wire. There was enhancement of the wall, suggestive of inflammation (Fig. 2). A probable diagnosis of foreign body in stomach and duodenum due to accidental or self ingestion of some chain or clip was considered, though patient denied any such history. The patient was planned for diagnostic UGI Endoscopy. In the presence of surgeon for possible laparotomy if required. UGI Endoscopy showed that the lower end of the oesophagus was hyperaemic with linear ulceration; Stomach showed a few superficial erosions, a piece of cloth was seen protruding from the pyloric opening. The cloth was removed with the help of endoscopic snare (Fig. 3). Duodenal wall at D1-D2 junction was hyperaemic, with ulceration seen, however no visible perforation was appreciated. It was an abdominal sponge complete with loop on its corner soaked with bile. With great difficulty the entire sponge was gradually pulled out. The Gastroenterologist's patience and skills were put to test. The patient withstood the procedure well. She was kept nil orally initially. Liquids followed by soft diet started gradually which she tolerated well and was discharged in good health.

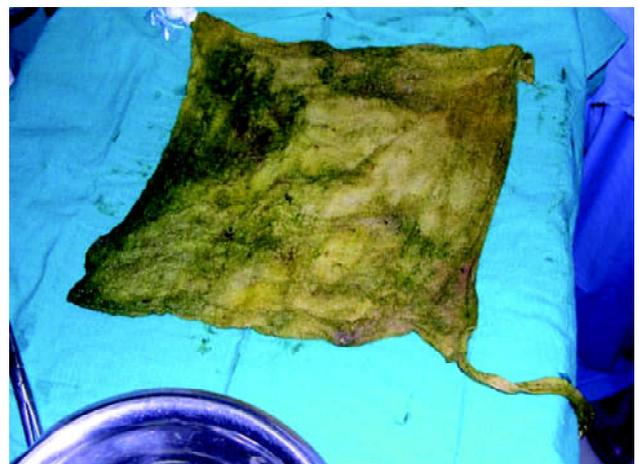


Fig. 3: Surgical sponge.

Discussion

This was an interesting case of recurrent vomiting in a young lady – post-cholecystectomy – caused by a foreign body gauze sponge which was removed by endoscopy. The exact incidence of gossypiboma is unknown but may be around one in 3,000 to 5,000 surgeries due to under-reporting of cases due to medico-legal liability⁴. The possibility of a retained foreign body should always be

kept in the differential diagnosis in any post-operative patient who presents with pain, infection, or palpable mass⁵. However, gossypiboma is often missed as the index of suspicion is low due to rarity of the condition and varying time frames of manifestation of symptoms. Such retained objects act as nidus of inflammation and infection and often lead to severe consequences, increased morbidity and mortality. The surgeon too is at risk of medico-legal liability⁶.

A forgotten foreign body can have disastrous consequences. The sponges are chemically inert. The patient may be symptom-free or may present with acute or sub-acute symptoms. Patients may present with complaints of abdominal pain, nausea, vomiting, anorexia, weight loss, or a malabsorption type syndrome⁷. They generally have symptoms related to obstruction, adhesions, fistula, abscess formations, intraluminal bacterial overgrowth, or erosion into the gastrointestinal tract⁸. In the abdomen, gut and omentum may also encapsulate the sponge leading to pressure necrosis and resultant partial or complete migration of the sponge into the lumen. The intestinal loop closes after complete migration of sponge. This may lead to fistula or obstruction and the patient may present with symptoms due to them^{8,9}. Rarely, patients develop symptoms of peritonitis or have gradual extrusion of sponge via the rectum⁶.

Emergency surgery is the most common cause of retained sponge. Other causes are unplanned change in operation and obesity⁷. During the operation, the team must work in coordination and be careful. It is better to avoid small gauzes in large cavities and methodical examination before wound closure should be done to avoid this avoidable complication. The WHO Checklist includes a definite instrument and sponge count at the end of the operative procedure and may help to reduce such complications⁷.

It is difficult to pick up the sponge radiologically as they do not use sponge with radio-opaque markers in it. When radiopaque markers are used, the sponges may be picked up easily. Technological advances are now being studied to prevent human error. Radio-frequency tagging and radio-wave detection of impregnated specialised magnetic metal are in an experimental stage¹⁰. Bar codes can be applied to all sponges, and with the use of a bar code scanner the sponges can be counted on the instrument trolley².

In this case, the patient had complications following cholecystectomy, due to a forgotten sponge in the abdomen near the gall bladder fossa which underwent transmural migration and was later extracted under gastroscopy. This is an interesting case where surgical sponge movement was seen upwards and thus blocked the duodenal opening. Moreover, in the past all foreign bodies were either removed through laparotomy or passed through rectum. In this patient, the sponge was removed by gastroscopy. During the procedure there was high-risk of eversion of duodenum, so it was done very slowly and gently, and the surgical team was ready for laparotomy or any eventuality. Gossypiboma is an avoidable complication of surgery. It can remain silent for months to years before manifesting itself with different symptoms. Strict and proper counting of sponges at the end of surgery and adoption of new techniques may help to minimise this.

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