Intraluminal Migration of Gossypiboma without Intestinal Obstruction for Fourteen years

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ABSTRACT

A 55 years lady presented with dull aching right upper abdominal pain with intermittent episodes of diarrhea following cholecystectomy which she underwent fourteen years back. Ultrasound and computed tomography findings were suggestive of foreign body in right subhepatic space. Exploratory laparotomy revealed circumvented loop of ileum with intra luminal mass sized 5x10 cm, resection anastomosis of the segment of ileum was performed. When opened it contained a surgical sponge with no external communication but an internal fistulous tract was present between the proximal and distal loops beyond the mass. Though intraluminal migration of retained surgical sponge has often been reported, complete intraluminal migration without features of obstruction or external opening is rarely seen.

Key words: *foreign body, gossypiboma, retained surgical sponge*

INTRODUCTION

Retained surgical sponge in the abdomen is not uncommon in surgical practice, but it has been under reported and rarely discussed because of medico legal implications.[1] Only about 50% of the cases are symptomatic in the form of bowel erosion, fistulae, abscess, obstruction, bleeding or chronic pain.[2] We report a case of retained surgical sponge following cholesystectomy done fourteen years back with complete intraluminal migration with an internal fistulous tract and no clinical features of intestinal obstruction.

CASE REPORT

A 55 year old lady who had undergone cholecystectomy fourteen years back following which she started developing dull aching pain in right upper abdomen with intermittent episodes of loose stools. There were no symptoms pertaining to intestinal obstruction. On examination, her vitals were stable, she had a scar in right subcostal region with a vague lump in right hypochondrium. Abdominal ultrasound demonstrated a hyperechoic mass and Computed Tomography scan reported an intraluminal calcified mass arising

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from the colon however, colonoscopy and barium enema revealed no abnormality. The clinical details and imaging were suggestive of a foreign body in the right subhepatic space. Exploratory laparotomy was done with the findings of gross adhesions over a loop of small bowel with a segment containing an intraluminal hard mass around 5x10 cm in size without any external communication to the other surrounding viscera. Resection anastomosis of the segment was performed and on opening the specimen it contained a surgical sponge. There was a fistulous tract with communication between the proximal and distal part of the ileal loop containing the sponge and bypassing the possible obstruction. The post operative period was uneventful and she was asymptomatic in the follow up after one year.

DISCUSSION

Gossypiboma, Textiloma are different names termed to coin a retained surgical sponge. (Gossypium in Latin meaning cotton and boma in Kiswahili meaning a place of concealment).[3] These cases are under reported and underestimated due to its medicolegal consequences.[4] Yet estimates suggest that it occurs in 1 in every 1000 to 1500 intra abdominal operations.[5] There had been 69 cases previously reported before Risher et al reported the case of intraluminal migration.[6] Possible risk factors identified were a change in nursing personnel during surgery, excessive blood loss, lack of complete count of sponges and fatigue of the surgical team due to lengthy and late procedures. Obesity, unprepared intra operative developments, involvement of multiple surgical teams and performance of more than one major procedure at a time were considered additional risk factors.[7]

Clinical presentation can be acute or delayed depending upon types of inflammatory reactions induced and the location. The body reacts by producing an aseptic fibrinous response, adhesions and encapsulation ensue leading to formation of clinically aseptic granulomatosis. If an exudative reaction occurs it leads to formation of an abscess with or without bacterial infection and later fistula formation. Regarding transmural migrations, a hypothesis based on animal study proposed four stages, foreign body reaction, secondary infection, mass formation and remodeling.[8] Necrosis of the intestinal wall occurs, and the foreign body penetrates into the intestinal lumen. Under favorable circumstances, peristalsis drags the foreign body into the intestinal lumen. In this case we can speculate that the intraluminal migration occurred due to necrosis of the bowel wall caused by the surgical sponge and adhesions of uninvolved bowel segments resulted in formation of fistula bypassing the possible obstruction.

Imaging studies can contribute to the preoperative diagnosis. Conventional radiography can accurately diagnose when radio opaque markers are used. However disintegration and fragmentation of the radio opaque marker may occur overtime. The image most frequently described in ultrasound is an echogenic area with an intense, sharply delineated posterior acoustic shadow due to highly reflective fiber texture of surgical sponge.[9] CT scan may show air trapped between surgical sponge fibers, calcification of cavity wall and contrast-enhanced rim, which may not be distinguishable from other intra abdominal abscesses.[10] MRI shows mass with variable signal intensity dependent upon the amount of fluid and protein accumulation. Only a high index of suspicion with the help of imaging studies in a previously operated patient can lead to a correct pre-operative diagnosis of this unfortunate condition. Various techniques are used for removal of retained sponge percutaneous, endoscopic, laparoscopic and exploratory laparotomy depending on clinical presentations and facilities available. Gossypibomas have even been removed even 30 years later.[11]

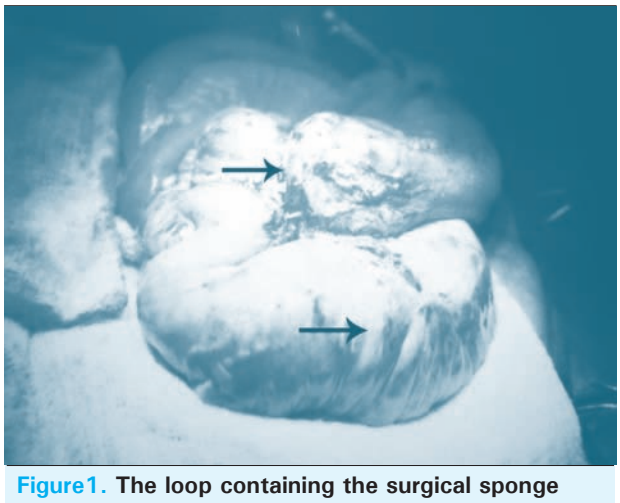

Figure1. The loop containing the surgical sponge bypassing possible obstruction

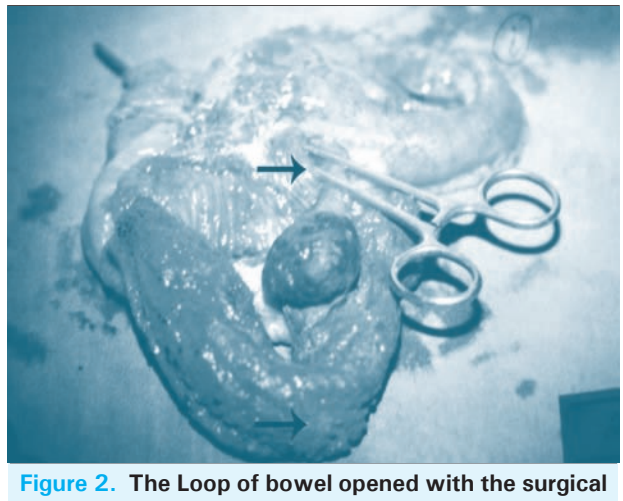

Figure 2. The Loop of bowel opened with the surgical sponge exposed with fistulous tract

Gossypiboma is a surgical mishap which can be avoided if guidelines for operative theatre record keeping are seriously followed. The surgical team should not unquestionably accept correct count reports, but should develop the habit of performing a brief but thorough routine post procedure wound body cavity exploration before closure. The routine use of radio opaque markers not used in our part of the world is a must. Despite all the technologic advances of the 21st century, human fallibility remains. The possibility of a gossypiboma exists even in modern medicine. As litigations are becoming ever more common for this avoidable problem prevention is the best treatment.

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