



CASE REPORT: GOSSYPIBOMA IN A 30 YEAR OLD FEMALE

General Surgery

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ABSTRACT

Surgical materials are sometimes inadvertently left in the body after surgeries. Cotton materials are the commonest objects forgotten [1]. The implications for the patient and the surgeon are serious. A significant complication of surgical practice is gossypiboma [2]. Despite significant interest and numerous guidelines, there are few known incidents because of a multitude of variables, including possible legal repercussions [2]. Gossypiboma, also called textiloma or cottonoid, refers to a foreign object, such as cotton matrix or a sponge, inadvertently left in the body cavity at the end of a surgical operation [3]. Here we describe a rare instance of transluminal surgical sponge migration in a 30 year old female who underwent low transverse cesarean section 3 months ago and presents with abdominal distention, anorexia, constipation and weight loss. She was thoroughly evaluated with imaging and suspected features of subacute small bowel obstruction. Patient underwent diagnostic laparoscopy with bowel resection and anastomoses. Patient eventually got better and was discharged.

KEYWORDS

INTRODUCTION :

The most prevalent form of retained foreign body (RFB) is a surgical sponge. This condition is called gossypiboma, derived from the Latin term gossypium (cotton) and the Swahili boma (place of concealment) [4]. Discovery of a retained sponge is made possible by two common responses, the first type is an exudative inflammatory reaction with the formation of an abscess and usually leads to early detection and surgical removal [4]. The second type is aseptic, resulting in the development of a mass and a fibrotic reaction to the cotton substance [4].

The omentum and intestines in the abdomen may surround the trapped foreign body in an effort to enclose it [4]. The exerted pressure and irritation on the bowel loops can lead to necrosis of the intestinal wall and the foreign object can erode partially or entirely into the lumen of the bowel [5]. Patients have symptoms of obstruction or malabsorption syndrome brought on by multiple intestinal fistulas or intraluminal bacterial overgrowth, including abdominal distention, discomfort, nausea, vomiting, anorexia, and weight loss [4] [5].

Case Presentation:

Here we present an 33 year old female, underwent low transverse cesarean section 3 months ago, she was apparently well, until 1 month prior to admission when she observed change in bowel habitus and mass like sensation over the right lower abdomen (right iliac fossa) which was on and off, along with crampy, non radiating abdominal pain. 10 days prior to admission, patient complained of constipation, with poor oral intake due to loss of appetite and associated weight loss. 2 days prior to admission, patient had episodes of vomiting, which was non-projectile, non foul smelling, bilious and containing food particles. Upon examination she was conscious, oriented and not in acute distress. Vitals were stable at BP: 110/70; HR -90 BPM, systemically unremarkable, on examining the abdomen, looks distended, tympanic on percussion, dull on percussion over the mass, hyperactive bowel sounds were heard and a palpable mass felt over the right lower abdomen (right iliac fossa). A provisional diagnosis of Subacute small bowel obstruction with a mechanical cause was made, and patient was ordered CT whole abdomen.

CT whole abdomen revealed acute small bowel obstruction secondary to intraluminal ? phytobezoar. Patient was explained about the condition and the need for surgery was inevitable. Patient underwent Diagnostic laparoscopy, upon entering the abdominal cavity there was ball of omentum over the right iliac fossa, adhesiolysis was performed and omentum was separated, because of interbowel adhesions it was decided to convert it into a mini laparotomy, a low midline incision was made and peritoneum was opened, the bowel loop was exteriorized, thorough bowel walk was done, a large dilated portion of terminal ileum was identified, resection was done using 75mm linear

stapler and the bowel ends were anastomosed side to side using 75mm stapler. No obvious collections or spillage of bowel contents were observed, thorough wash was given and the incision was closed in layers. Post operative period was uneventful, patient recovered well and was discharged on Post operative day 4 after orals were started.



Figure 1: Resected terminal ileum segment with hard impacted stool and surgical sponge



Figure 2: Gross appearance in the Pathology laboratory showing resected specimen with erosion in the lumen, and the spread out surgical sponge.

The resected specimen was sent to histopathology. On gross examination of the specimen distended segment of terminal ileum was opened and impacted content found. Histopathological examination revealed extensive ulceration with subacute inflammatory exudate and congestion, there were many foreign body type giant cells with foreign

body material in the cytoplasm, gross and microscopic examination by the pathology department, confirmed the diagnosis of gossypiboma.

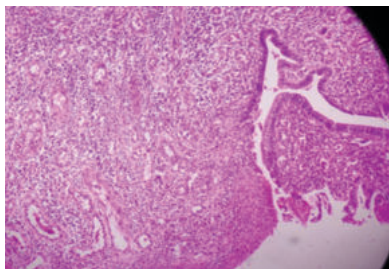


Figure 3: Microscopic appearance differentiating normal part of the terminal ileum with foreign body reaction of the involved segment of the terminal ileum

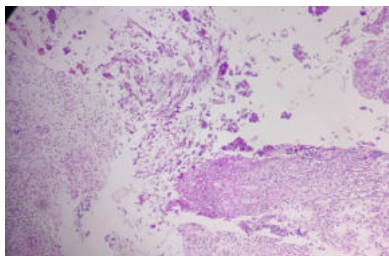


Figure 4: Microscopic appearance of cotton fibers on the central top of the slide, with foreign body giant cell reaction over the left of the slide.

DISCUSSION:

Surgery is medical speciality that uses operative manual and instrumental techniques on a person to investigate or treat pathologies and is done by teamwork which entails the surgical team, the anesthetic team, the operating room attendants, the staff nurse, and the medical students.[6] Retained foreign bodies continue to be an unfavorable surgical complication and frequently generate concerns about patient safety even in the presence of a large number of qualified or undertrained personnel in the operating room. [6] Based on experimental evidence, a RFB(retained foreign body) inside the abdomen initiates an inflammatory reaction of variable severity in different individuals[7].

Exudative or fibrinous are two terms used to characterize the inflammatory reaction. [7] A stronger antigenic potential and/or a severe inflammatory response favor an exudative reaction that results in the release of capillary contents.[7] This early reaction causes an abscess to grow around the foreign body. Gradually as the pressure increases, it may rupture toward its weaker wall, which is often the intestinal wall causing the development of a fistula and finally forcing the surgical sponge partially into the intestinal lumen. [7] Peristaltic waves may further withdraw the gauge completely into the lumen.[7] Once inside the lumen, it is propelled forward by peristalsis. Depending on its size, it may either pass spontaneously in the feces without the knowledge of the patient or it may get stuck at the narrowest part of the intestinal lumen such as ileocecal valve and results in complete or partial intestinal obstruction. [7][8][9] When there is partial intestinal obstruction, undigested food residue builds up over time close to the blockage site. This is followed by a few bouts of partial obstruction before there is complete obstruction. [10]

The fibrinous response, which tends to happen later, is favored by low levels of antigenicity and/or a milder inflammatory response. This can cause the sponge to become encapsulated, form a mass, create bands and adhesions, calcify, degrade, or, less frequently, migrate as in an exudative response.[7]

Recent research reveals that gossypiboma can cause tumor growth, with sarcomas being the most likely type of malignancy. Carcinogenesis based on inflammation is the proposed mechanism.[11]

Medicolegal implications

Medical malpractice claims are brought about by a surgical sponge that remains in place. This is sometimes described as “Res Ipsa Loquitur”, which means that “the item speaks for itself” and that the current problem would not have occurred in the absence of surgeon's incompetence.[12]

Prevention

Accepting that surgical sponges still remain inside the body after surgery and increase patient morbidity and death is the first step in prevention. In addition, team members' communication should be kept open. [13] One member of the surgical team should be made responsible for counting of sponges and getting it cross-checked by another team member. All quadrants of the abdomen should be explored for surgical sponges and instruments before closing the abdomen. [14]

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