Letters to the Editor

Abdominal lump with intestinal obstruction: Prior history of abdominal surgery is a clue to diagnosis

Sir,

A 30-year-old man presented with intermittent central abdominal colicky pain, bilious vomiting, and constipation for 2 days. The patient had undergone laparotomy and primary repair of enteric ileal perforation 6 months back. He had upper abdominal fullness with a tender firm lump 4 × 4 cm in size palpable in the umbilical and left lumbar area. Abdominal roentgenography showed dilated jejunal loops. Ultrasound of the abdomen revealed dilated hypo-peristaltic bowel loops and the presence of a hypoechoic mass in the left lumbar area. Contrast enhanced computed tomogram (CECT) of the abdomen revealed the presence of dilated small bowel loops along with a mass having spongiform appearance suspicious of gossypiboma [Figure 1]. Laparotomy showed the presence of a lump located two feet distal to the duodenojejunal flexure with distended proximal jejunal loops and collapsed distal bowel loops. The lump was firm in consistency with normal overlying serosa. Enterotomy was performed and a surgical sponge was retrieved [Figure 2]. Enterotomy was closed transversely in two layers. Postoperative period was uneventful and the patient was discharged on the 5th post-operative day.

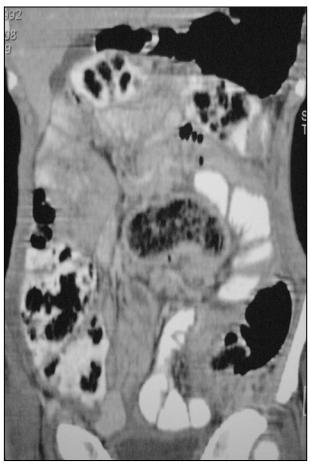

Figure 1: Contrast enhanced computed tomogram image showing intraluminal hypodense spongiform mass

Gossypiboma or retained surgical sponge is an age-old problem that continues to embarrass the medical fraternity. Almost any surgical procedure involving dissection underneath the skin and subcutaneous tissue can be associated with this mishap. The incidence of gossypiboma for abdominal surgeries ranges from 1 in 1,000 to 1 in 10,000 interventions.[1] Surgical sponge is one of the most frequently used entity in an open surgical procedure and also the most common inadvertently left-out items inside the abdominal cavity. Factors such as its small size, soft amorphous texture, pliable nature, and its ability to appear similar to that of peritoneal linings when soaked with hemorrhagic body fluids make the innocuous sponge the worst culprit. Factors contributing to gossypiboma include grossly obese patients, massive haemoperitoneum, emergency surgery, inexperienced surgeons, intraoperative change in the operating team, and lack of clear defined protocol for sponge count.[2,3]

Clinical presentation of gossypiboma varies depending on the type of host response generated. Patients with an aseptic fibrous-type reaction have a chronic indolent course with the formation of adhesions, granuloma, and pseudotumors. Patients mounting an exudative-type reaction have an early and acute presentation with features of bowel obstruction and bacterial peritonitis. Internal fistulation into an adjacent hollow organ with complete intraluminal migration is an uncommon occurrence. When the retained material is in contact

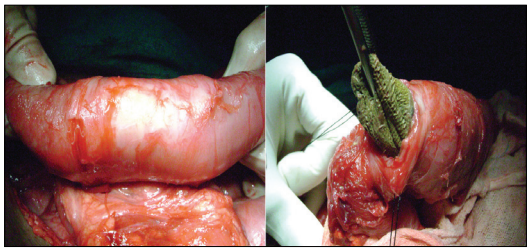

Figure 2: Intraoperative photograph showing retrieval of surgical sponge from the lumen of bowel loop

with the wall of a hollow viscous, the mounting pressure exerted by the surrounding inflammatory reaction may force it to penetrate the wall of the hollow viscous and into its lumen. The standard investigation for confirmation of diagnosis is CECT of the abdomen. The presence of a spongiform mass in the peritoneal cavity on CECT imaging is characteristic of gossypiboma.[4] Once diagnosed, removal of the foreign body is necessary to prevent future unwanted complications. Intense inflammatory reaction induced by gossypiboma leads to the formation of extensive intra-abdominal granulations and adhesions. Hence, open exploration is preferred over minimally invasive techniques for retrieval of gossypiboma.

Various preventive measures such as the use of fixed number of sponges in all procedures, using sponges with radio-opaque markers, avoiding the use of small-sized sponges, counting the sponges at least thrice during the procedure and communicating the count to all members, thorough checking of all abdominal recesses prior to closure, and liberal use of post-operative check X-ray in case of doubt in sponge count can reduce the occurrence of gossypiboma. Newer methods such as bar coding of sponges and radiofrequency identification technology have improved the success rate of missed sponges; however, limited experience and increased cost have hindered their widespread acceptance.[5] The incidence of gossypiboma is showing a decreasing trend in recent times. The biggest contributing factor is the advent and widespread acceptance of minimal access surgery, which has practically done away with the use of surgical sponge during the operative procedures. Our case reaffirms the age-old saying "prevention is better than cure" and patient safety should be the top priority during any surgical intervention.

Debajyoti Mohanty, Pankaj Kumar Garg, Anjay Kumar, Bhupendra Kumar Jain
Department of Surgery, University College of Medical Sciences, and Guru Teg Bahadur Hospital, University of Delhi, New Delhi, India

Correspondence to: Dr. Pankaj Kumar Garg, Department of Surgery, University College of Medical Sciences, and Guru Teg Bahadur Hospital, Dilshad Garden, New Delhi - 110 095, India.
E-mail: dr.pankajgarg@gmail.com

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