Egyptian Journal of Surgery Vol.33, No.1, January 2014

CASE REPORT

RETAINED SURGICAL SPONGE AS A CAUSE OF INTESTINAL OBSTRUCTION; A CASE REPORT

Hisham Farouk Fergani
Atfeeh Central Hospital, Atfeeh, Guiza, Egypt

Email: Hisham.fergani@gmail.com

Abstract

A retained surgical foreign body is an unfortunate although avoidable event. Intraluminal migration is rare. The author reports a case of a retained surgical sponge that had migrated totally into the small bowel and presented with repeated attacks of sub-acute intestinal obstruction. An exploratory laparotomy was done with removal of the retained surgical sponge, which was followed by complete recovery.

Keywords: Gossypiboma, migration, intraluminal.

INTRODUCTION

Gossypiboma, from the Latin "Gossypium" for cotton and Swahili "boma" for place of concealment, is a cotton foreign body retained in a body cavity. The true incidence is probably unknown, it has been reported as 1 in 100 to 3000 for all surgical procedures and 1 in 1000 to 1500 for intra-abdominal operations.[1-2] The condition is rarely reported due to medico-legal implications and consequences. Patients may present with an inflammatory reaction with abscess formation or with a picture of intestinal obstruction. The occult character of this type of intestinal obstruction as well as the absence of an obvious cause usually leads to the delay in institution of therapy. Non-specific clinical symptoms and inconclusive imaging findings may preclude an accurate diagnosis.[3]

CASE REPORT

A 30 year old lady presented with severe colicky abdominal pain, recurrent vomiting, and abdominal distension for the previous 4 days. She was passing small amounts of stool and flatus. She gave a history of previous similar episodes over the past four months, for which she was repeatedly hospitalized with a provisional diagnosis of sub-acute intestinal obstruction that was managed conservatively.

She is married and mother of five children, all delivered by cesarean section, the last one 4months before the start of the current complaint. She has no relevant medical history. She gave a history of a colonic injury during the last cesarean section that was identified and managed at the time of surgery.

On examination she was found to be pale, anxious and tachycardic. Her BP was 120/70, Pulse was 100/min, RR within normal. Abdominal examination showed moderate distension of the abdomen, more in the epigastric and right para-umbilical regions. She was markedly tender in the epigastric and left para-umbilical region, but no palpable masses were felt. PR showed an empty rectum, and her intestinal sounds were audible.

Labs done at the time showed a HB of 10.5, with microcytic hypochromic anemia, white count was 7.3, and platelet count was 590,000. Liver function tests, urea and BUN were all within normal range.

A plain abdominal x-ray showed very few dilated bowel loops with air-fluid level in the right side of the abdomen. An abdominal ultrasound showed a well-defined heterogeneous mass measuring 52x58x55 mm in the umbilical region very close to the abdominal wall with strong echogenic wall and hypo-echoic halo. There was no free fluid. An MRI of the abdomen was performed a week later and showed an ill-defined mass of heterogeneous consistency in the epigastric region in relation to the transverse colon, otherwise normal results. Based on the clinical picture and the presence of this mass it was decided to do an exploratory laparotomy.

Examination under anesthesia revealed a 12 cm rounded mass in the epigastric region that was not mobile, and another longitudinal mass in the left para-umbilical region about 15 by 4cm that was freely mobile. At laparotomy, the round mass in the epigastric region was found to be a mass of amalgamated small bowel loops adherent to the base of the mesentry under the transverse colon. The longitudinal mass in the left side of the abdomen was delivered into the wound and was found to be a jejunal loop that contained a firm indentable structure. The bowel loops beyond that point were collapsed.

The adhesions binding the small bowel loops were found to be very dense and fibrous. During lysis of the adhesions the small bowel was inadvertently opened at the anti-mesenteric border, and the edges of the opening were found to be devitalized and unhealthy, with not much active bleeding. After lysis of the adhesions, the longitudinal mass mentioned earlier was found to be about 30cms distal to the opening in the small bowel. The mass was milked easily and was found to be a rolled-up surgical towel. The towel was removed, and a resection-anastomosis of the devitalized segment was performed.

After confirming the integrity of the anastomosis and free-flow of intestinal contents the abdomen was irrigated with normal saline and closed in layers with tube drains in both para-colic gutters and at the site of the anastomosis.

The patient had a smooth post-operative course. She was put on Ceftriaxone 1gm bid, and Metronidazole 500mg tds. Intestinal sounds were audible on the 3rd post op day, and she started oral fluids on the 4th post op day. She developed a single spike of fever on the 2nd post-op day that was diagnosed as milk engorgement, and subsided after expression of the milk. The drains were removed on the 5th and 6th post op days and the sutures were removed on the 7th post op day. She remains symptom-free to date.

CONCLUSION

Small bowel obstruction due to a retained foreign body does not rank high on the list of differential diagnosis of post-operative mechanical intestinal obstruction. It is rarely seen in daily surgical practice. Contributing factors to this unfortunate event are emergency operations, unplanned surgical procedure- in this case the colonic injury that was sustained during the previous surgery-and a high body mass index.(1)

A retained sponge may result in abdominal pain, abdominal mass, peritonitis, adhesions, fistulas and intra-abdominal abscess. It may present acutely or delayed depending on its size, type, location and the nature of the body's reaction. One of two foreign body reactions may occur. The first is an aseptic fibrinous response that creates adhesions and encapsulation with a resulting foreign body granuloma. The second is an exudative reaction that leads to abscess formation with or without secondary bacterial infection.(4) A rare event is the erosion of the sponge into the lumen where it may lie partially or wholly in the lumen.

Intra-peritoneal surgical sponges evoke an inflammatory reaction that is surrounded by omentum and nearby viscera. The foreign body exerts pressure which forces an opening in the bowel, allowing a fold of the sponge to enter the lumen. Peristaltic activity of the bowel helps to propel the sponge further into the lumen of the lumen, and the point of entry is sealed by the resulting adhesions. The obstruction at this point is partial because liquid intestinal contents can still diffuse through the sponge and serves to decompress the bowel.(5)

Prevention of gossypiboma can be done by simple precautions as manual counting once before and twice after the procedure. The use of sponges tagged with radio-opaque markers can avoid over-investigating patients. An electronic article surveillance system which uses a tagged surgical sponge that can be identified electronically has been examined.(6) Bar codes can be applied to all sponges which can be scanned by a bar code scanner at the end of the procedure. The rarity of the condition and latency in the manifestation of the symptoms as well as the low index of suspicion leads to misdiagnosis and delay in proper management. If discovered early, laparoscopic retrieval may be feasible.(7)

REFERENCES

1. Gawandee AA, Studdert DM, Orav EJ, Brennan TA, Zinner MJ. Risk factors for retained instruments and sponge after surgery. N Engl J Med. 2003;348:229-35.

2. Dux M, Gauten M, Lubienski A, Grenacher L. Retained surgical sponge with migration into the duodenum and persistent duodenal fistula. Eur Radiol. 2002;12:74-7.

3. Prasad S, Krishnan A, Lindi J, Patankar T. Imaging features of gossypiboma: report of two cases. J Postgrad Med. 1999;45:18-19.

4. Hayman J, Huygens H. Angiosarcoma developing around a foreign body. J Clin Pathol. 1983;36:515-18.

5. Silva CS, Caetano MR, Silva EA, et al. Complete migration os retained surgical sponge into ileum without sign of opened intestinal wall. Arch Gynecol Obstet. 2001;265:103-4.

6. Fabian CE. Electronic tagging of surgical sponges to prevent their accidental retention. Surgery. 2005;137:298-301.

7. Uranus S, Schauer C, Pfeifer J, Dagioglu A. Laparoscopic removal of a large laparotomy pad forgotten in situ. Surg Laparosc Endosc. 1999;5:77-9.