JKAU: Med. Sci., **Vol. 12,** pp: 127-132 (2005 A.D. / 1425-1426 A.H.)

Intestinal Obstruction Due to Retained, Eroding Surgical Sponge: A Case Report

FATMA K. AL THUBAITY
Department of Surgery, Faculty of Medicine,
King Abdulaziz University, Jeddah, Saudi Arabia

ABSTRACT. Gossypiboma is not an uncommon surgical complication but it is rarely reported mainly due to medico-legal problems. A case of a surgical sponge left in the peritoneal cavity at caesarean section eroded into the bowel and caused intestinal obstruction one year later is presented. She was treated with small bowel resection. Small bowel wall opened by enterotomy and sponge removed. A report of a correct sponge count in the operating room does not exclude the possibility of a retained surgical sponge. Certainly it is the responsibility of the surgeon to make sure that he did not leave any sponge behind. This issue will be discussed in this paper. The English literature was reviewed.

Keywords: Intestinal obstruction, Gossypiboma, Transmural migration.

Introduction

The term "gossypiboma" denotes a cotton foreign body that is retained inside following surgery. It has been reported to occur following surgical procedures such as abdominal, thoracic, cardiovascular, orthopaedic, and even neurosurgical operations. It has been reported as 1 in 1,000 to 1,500 for abdominal operations. It can create a medico-legal problem especially for surgeons. Gossypiboma is one of the rare causes of an intestinal obstruction. It is the dread of every surgeon. This is the first case reported in our hospital of small bowel obstruction caused by transmural migration of laparotomy sponge without opening of the intestinal wall.

Correspondence & reprint requests to: Dr. Fatma K. Al-Thubaity
P.O. Box 80215, Jeddah 21589 Saudi Arabia
Accepted for publication: 25 June 2005. Received: 10 May 2005.

A 27-year-old Somali female patient presented with slowly growing abdominal pain and vomiting for one year. It was associated with loss of weight. Absolute constipation for one week and abdominal distension for one day duration. She had cesarean section one-year ago which was done in a hospital other than our hospital.

On examination her temperature is 37.4°C, blood pressure 140/86 mmHg. Abdominal examination revealed distended abdomen with scar of caesarean section, diffuse tenderness and reducible paraumbilical hernia. Investigation showed leukocytosis, Kidney, ureter, and bladder (KUB) showed distended small bowel with metallic marker (Fig. 1) and abdomen computerized tomography (CT) scan showed distended, abnormally small bowel with hyperdense lesion inside it, mottled appearance suggestive of gangrene (Fig. 2).

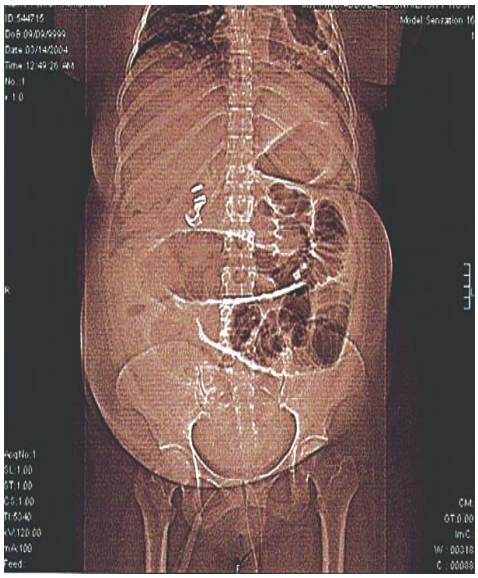

Fig. 1. KUB showing a metallic marker with distended small bowel.

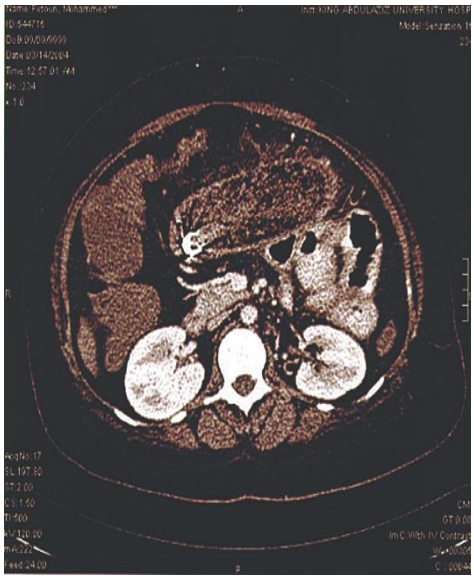

Fig. 2. C.T. scan of abdomen showing a distended abnormal small bowel loop with hyperdense lesion inside it.

Laparotomy was carried out and an ileal loop measuring 9 cm was found to be gangrenous, distended by an inside large and hardened mass with intestinal loops (Fig. 3) and omentum density adherent. Small bowel resected (Fig. 4) and primary anastomosis was performed. The length of the resected specimen is 70 cm. Surgical specimen was opened (Fig. 5) and intraluminal surgical sponge removed (Fig. 6). No opening of intestinal wall. Histopathology of gangrenous part shows loss of surface epithelium and acute inflammatory cell infiltrate extending to the serosa.

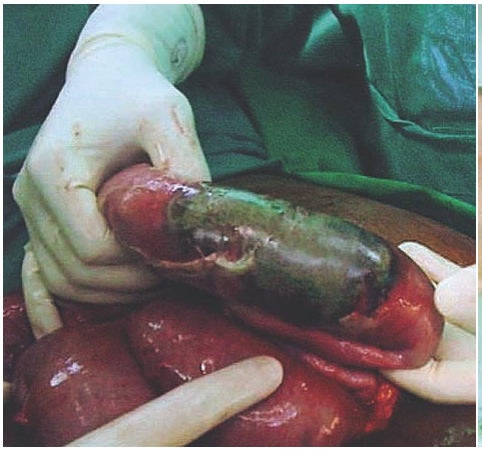

Fig. 3. Gangrenous ileal loop with hardened mass inside it.

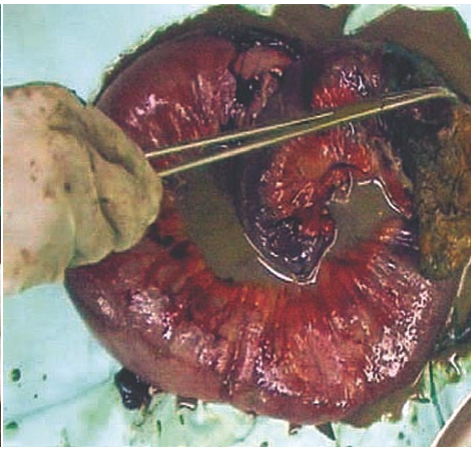

Fig. 4. Resected small bowel.

Fig. 5. Opening of the intestinal wall.

Fig. 6. Laparotomy sponge removed.

Discussion

The most common surgically retained foreign body is laparotomy sponge[1]. The incidence of gossypiboma varies between 1 in 100 and 1 in 3000 procedures[2]. Gossypiboma can be discovered within the first 2 weeks[3] or many years later, the longest being 30 years post operatively[4]. Its presentation varies from being asymptomatic (found accidentally or may never be discovered) to fatal complications. Clinically, it may present as a palpable mass, low grade fever, acute or chronic abdominal pain, an abscess, intestinal obstruction[5], fistula into any hollow viscus including stomach, duodenum, small bowel, colon, rectum or bladder. 50% will become symptomatic in the form of erosion into the bowel or vessels, fistulae, abscesses, obstruction, bleeding or chronic pain[6,7].

Apparently an inflammatory response created an abscess pocket around the sponge between the abdominal wall and the ileum resulting in perforation of the ileum, through the opening the sponge migrated into the lumen of the small bowel, from which it was surgically removed[1,8,9].

Plain X-ray may show a marker if the sponge is labelled with radio-opaque marker or calcification[6,10]. A whirl-like pattern has been described as being characteristic of retained sponges[11] this finding may be due to gas of intestinal origin trapped between the fibers of the sponge. CT finding have described foreign body granuloma as round sharply outlined mass with dense enhancing wall. The centre of the lesion have heterogenous densities created by a whirl-like structure of high or low attenuation[3,12].

A high index of suspicion is needed to diagnose gossypiboma . Usually it is treated surgically. Laparoscopic retrieval is feasible especially if discovered early[6,13].

Retained surgical sponge is lethal condition when neglected and can lead to major complications when left untreated. All preventive measures should be taken to avoid this condition[14,15]. A thorough exploration of all quadrants of the abdomen at the termination of surgical cases is mandatory[1,16]. Inspite of all the effort usually done by the nurses in counting the sponge and instrument, the cases of foreign body is still seeing which could be due to failure in the counting by the attending nurses and the responsibility of nursing in missing the foreign body is debatable some consider it the responsibility of surgeon, but in my opinion, is it the surgeon responsibility to clarify that the sponge and instrument count are complete.

Acknowledgment. I would like to thank Professor Yasir S. Jamal for reviewing the manuscript and to Mrs. Joy A. De Silva for her secretarial help.

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حالة مسجلة عن انسداد الأمعاء نتيجة للاحتفاظ بالضماد الجراحي المتآكل

فاطمة خنيفس الثبيتي
قسم الجراحة ، كليةالطب ، جامعة الملك عبد العزيز ، جـــدة – المملكة العربية السعودية

المستخلص. تمت دراسة حالة ترك ضماد من الشاش الطبي المستخدم في الجراحة في التجويف الصفاقي حين إجراء عملية ولادة قيصرية ، وقد تحاتت في الأحشاء (المعي) وسببت إنسداداً معوياً وقد تم عرض هذه الحالة بعد عام ، واستعرضت أدبياتها باللغة الإنجليزية . الورم القطني ليس مشكلة جراحية غير عامة ، ولكن من النادر أن توجد عنه تقارير مكتوبة ، وذلك يرجع بصفة أساسية إلى الإشكالات القانونية الطبية . وأن التقرير السليم عن ترك ضمادة من الشاش الطبي في غرفة العملية لا يستبعد إمكانية استبقاء الضماد من الشاش الطبي المستخدم في الجراحة ، وبالتأكيد فإنها مسؤولية الطبيب الجراح للتأكد من أنه لم يترك أي ضماد من الشاش الطبي خلفه . ونحن نقدم حالة ورم قطني ، وقد تم عرضها مع انسداد المعي الصغير ، وقد تمت معالجتها بقطع المعى الصغير . وتم فتح جدار المعي الصغير وإزالة ضماد الشاش الطبي .