INTESTINAL OBSTRUCTION CAUSED BY RETAINED SURGICAL SPONGE: TWO CASE REPORTS

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SUMMARY
We present two cases of intestinal obstruction from retained laparotomy packs and their management. Attention to detail in theatre procedure should reduce such occurrence.

INTRODUCTION
Retention of sponges in the peritoneal cavity after laparotomy is an avoidable complication which unfortunately still occurs. Various methods including radio opaque markers have been used to try and minimize this occurrence or to ensure its early detection. Adherence to theater protocol such as counting packs before and after surgery remains the most useful in the sub-region as theatre X-ray facilities may not be available to detect retained packs.

Case 1
A 39-year-old woman with a lower midline incisional hernia was seen in the emergency room with a day's history of colicky abdominal pain and vomiting. She had experienced similar episodes in the preceding 6 months associated with incisional herniation and for which she had sought no medical help. The patient had an emergency caesarean section for failed induction of labour 10 months earlier.

On examination she was in moderate discomfort, her blood pressure was 153/113mmHg, the heart rate was 75 beats/min and temperature 36^0C. Her abdomen was not distended and the incisional hernia was easily reducible. A tender mass initially palpated in the left iliac fossa was later palpated in the right iliac fossa on repeated examination. Bowel sounds were increased in frequency and pitch. Vaginal examination confirmed the presence of a right adnexal mass with a normal sized uterus shifted to the left. The rectum was empty on digital rectal examination. A preliminary diagnosis of intestinal obstruction caused by adhesions was made.

Her leukocyte count was 14.5 x 10^9 with a neutrophilia of 87%. Plain abdominal x-rays revealed distended loops of bowel suggestive of small bowel obstruction possibly due to adhesions. Abdominal ultrasonography showed a normal sized uterus and cervix. The right ovary could not be identified but in its place, a hypoechoic mass of 8x8cm was found. The left ovary was normal.

An emergency laparotomy was performed because the symptoms did not resolve over the next 24 hours. At operation multiple adhesions between loops of bowel were found.

An intraluminal ileal mass about 40cm from the ileocaecal valve was found to be the cause of obstruction. The right ovary was normal. Enterotomy revealed an intact laparotomy towel (Figure 1). The enterotomy was closed in two layers and the hernia repaired. The patient made an uneventful recovery and was discharged on the tenth postoperative day. She was seen weeks postoperatively with no complaints.

Figure 1 Laparotomy towel

Case 2
A 33 year-old woman was admitted to the emergency department with a 3-day history of vomiting, constipation and left upper quadrant abdominal pain. The vomit was bile-stained and contained undigested food. This was followed a day later by absolute constipation. The patient had had a laparotomy 5 months earlier following a road traffic

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accident in which she suffered liver laceration and had intra-abdominal packs placed in order to control haemorrhage. The abdominal packs were presumably all removed as bleeding was controlled at the end of the procedure and there was no record of a "second look" operation.

On examination she looked ill and dehydrated with a heart rate of 100 beats/min, blood pressure of 100/60mmHg and a temperature of 37.2^0C. Her abdomen had an upper midline scar, was not tender and had a palpable mass in the left hypochondrium. Bowel sounds were increased in frequency and pitch.

Her white cell count was $21.7x10^9$ with 65% neutrophils. Plain x-rays of her abdomen showed small bowel air fluid levels and a radio-opaque mass suggestive of a retained abdominal pack (rayon marker).

An emergency laparotomy was performed to relieve presumed adhesions and to retrieve the pack. At surgery several of the small bowel adhesions were found and lysed but were not thought to be the cause of the obstruction. An intraluminal foreign body was found to be the cause of the obstruction about 30cm from the ileocaecal valve. A laparotomy sponge was retrieved through an enterotomy, which was closed in two layers. The patient was discharged on the tenth postoperative day, has been reviewed at three and six months post operatively and she remains well.

DISCUSSION

Intestinal obstruction remains a major indication for emergency surgery in Ghana[1]. Foreign bodies are listed as a rare cause of intestinal obstruction. The commonest foreign body causing intestinal obstruction remains laparotomy sponges[2]. Other foreign bodies include vaginal pessaries[3], surgical drains[4], vascular grafts[5], migrating Angelchik prosthesis[6] and ventriculaoperitoneal shunts[7]. There is a single case report of a metallic ring being left for over 40 years before becoming symptomatic[8]. The interval after which a retained laparotomy sponge becomes symptomatic may be determined by its position in the peritoneal cavity[9].

Crossen in 1940 reported that extrusions into hollow viscera may occur into the intestinal lumen, rectum, vagina or bladder[10].

Both cases presented in this report had symptoms of intestinal obstruction within one year of the pack being retained. The mechanism was probably through slow pressure necrosis of the bowel wall with migration of the sponge into the lumen and sealing off of the wall with minimal peritoneal soiling. There have been anecdotal reports of this in Ghana but this appears to be the first documentation of this event at the Korle Bu Teaching Hospital. It is important that we pay attention to detail in order to minimize these occurrences. Swab and instrument count should be done before any wound is closed.

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