

Small Bowel Obstruction and Enterocolic Fistula from a Gossypiboma after Caesarean Section

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INTRODUCTION

Gossypiboma is derived from two Latin and Swahili words including gossypium (cotton) and boma [place of concealment] (1). It is a kind of retained foreign body (RFB) following surgery (2). It causes two types of reaction including exudative inflammatory reaction and aseptic fibrotic reaction. The first type causes reaction to the material of sponge and presents as a mass in the body. The second forms an abscess and results in early diagnosis, leading to surgical removal (3).

Keywords: Caesarean section, bowel obstruction, gossypiboma

CASE REPORT

A 35-year old woman presented with colicky abdominal pain, vomiting and constipation for one week. She gave a history of Caesarean section about two years previously. On physical examination, she had generalized abdominal distention and tenderness and bowel sounds were hyperactive. Rectal examination was normal. Plain abdominal radiograph revealed multiple air fluid shadows and a “stepladder” pattern. It did not show any sign of a radio-opaque marker in the abdomen.

Ultrasonographic examination of the abdomen and pelvis showed partial dilation in the proximal loop of the ascending, transverse and descending colon. Thickening of the descending and proximal sigmoid colon wall was also found. The laboratory investigation yielded the following results: a white blood cell (WBC) count of $15\,400/\text{mm}^3$, a haemoglobin of 6.5 g/dL, erythrocyte sedimentation rate (ESR) = 54 mm/hour Westergren and C-reactive protein (CRP)³⁺. Other routine laboratory tests were normal. Exploratory laparotomy was performed. There were two sponges in the abdomen (Figs. 1–3). The first one was in the omentum and the other one was in an enterocolic fistula in the distal ileum 10 centimeters proximal to the ileocaecal junction.

Omentectomy was done to extrude the mop, and intestinal continuity was established by end-to-end anasto-

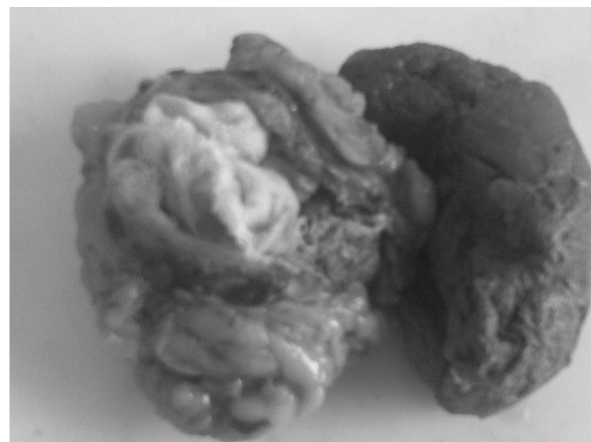


Fig. 1: The two sponges found in the abdomen.



Fig. 2: Expanded sponge.

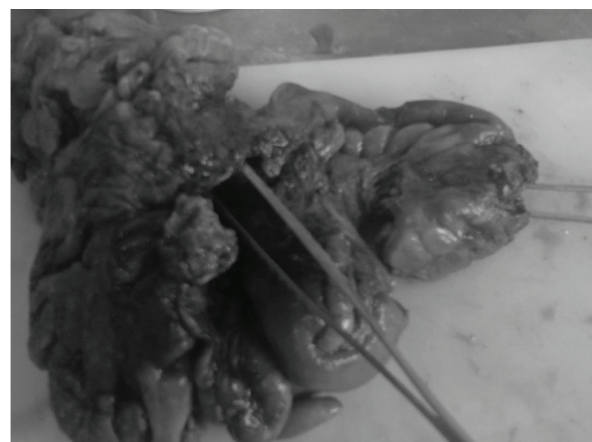


Fig. 3: Site of fistulization.

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mosis following partial resection of the fistulized segment (ileum and right colon). The patient was discharged in stable condition.

DISCUSSION

According to recent reports, one RFB occurs in 1000 to 1500 laparotomies (4). But it seems that this complication is usually under-reported because of medico-legal consequences. Furthermore, surgeons usually do not like to report their errors (5).

Wan *et al* suggested that the most common site where gossypiboma is found is in the abdomen (56%) and the less common locations are pelvis (18%) and thorax (11%). Imaging methods commonly used for diagnosis of RFB are radiography (35%), computed tomography (61%) and ultrasound [34%] (6).

Presentations of gossypiboma may vary from an asymptomatic condition to different complications. It may present like an intra-abdominal mass and migrate to the intestine and result in intestinal obstruction. In some cases, it may cause fistulae into surrounding structures or result in granulomas, sepsis and gastrointestinal bleeding (7).

Gossypibomas usually have non-specific symptoms and can be asymptomatic for many years. It may take about seven years for RFBs to be diagnosed (4).

Different factors may cause gossypiboma. Unexpected change in the operation, high body mass index and emergency surgery are identified as major causes of gossypiboma. Other risk factors such as surgical counts, large intra-abdominal tumours, fatigued surgical team, more than one surgical team involved and change in nursing staff during procedure may also have an effect on gossypiboma occurring. In 88% of gossypiboma cases, counting was performed but the count was falsely documented. Emergency Caesarean section was reported as one important cause of gossypiboma in developing countries (5, 8).

Some standard precautionary measures may reduce the occurrence of gossypiboma including meticulous count of

double sponge before surgery and at the conclusion of the procedure, using sponge with radio-opaque marker, and using large ribbon attached sponge and avoiding use of small gauze for the peritoneal cavity. Radiographic imaging to assess possible occurrence of RFB after high-risk operation should be considered, especially when the textile counting seems to be wrongly performed (9, 10).

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REFERENCES

1. Patil KK, Patil SK, Gorad KP, Panchal AH, Arora SS, Gautam RP. Intraluminal migration of surgical sponge: gossypiboma. *Saudi J Gastroenterol* 2010; **16**: 221–22. doi: 10.4103/1319-3767.65195.
2. Sumer A, Carparlar M, Uslukaya O, Bayrak V, Kotan C, Kemik O et al. Gossypiboma: retained surgical sponge after a gynecologic procedure. *Case Rep Med* 2010; **2010**: 917626. doi: 10.1155/2010/917626. Epub 2010 Aug 3.
3. Choi JW, Lee CH, Kim KA, Park CM, Kim JY. Transmural migration of surgical sponge evacuated by defecation mimicking an intra-peritoneal gossypiboma. *Korean J Radiol* 2006; **7**: 212–14.
4. Moslemi MK, Abedinzadeh M. Retained intraabdominal gossypiboma, five years after bilateral orchiopexy. *Case Report Med* 2010; **2010**: 420357. doi: 10.1155/2010/420357. Epub 2010 Mar 4.
5. Ugochukwu AI, Amu O. Acute abdomen from gossypiboma: a case series and review of literature. *Eur J Sci Res* 2011; **58**: 3.
6. Lata I, Kapoor D, Sahu S. Gossypiboma, a rare cause of acute abdomen: a case report and review of literature. *Int J Crit Illn Inj Sci* 2011; **1**: 157–60. doi: 10.4103/2229-5151.84805.
7. Singh C, Gupta M. Gossypiboma versus gossip-boma. *Case Rep Radiol* 2011; **2011**: 705062. doi: 10.1155/2011/705062. Epub 2011 Oct 16.
8. Aminian A. Gossypiboma: a case report. *Cases J* 2008; **1**: 220. doi: 10.1186/1757-1626-1-220.
9. Sankhe AP, Joshi AR. Gossypiboma: cause of intestinal adhesions. *Internet J Radiol* 2007; **6**.
10. Gencosmanoglu R, Inceoglu R. An unusual cause of small bowel obstruction: gossypiboma – case report. *BMC Surgery* 2003; **3**: 6.