



Surgical Sponge After Splenectomy: A Rare Case Report

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ABSTRACT

A gossypiboma is a cotton sponge retained in the abdominal cavity after the operative procedure. It leads to tremendous morbidity, loss of money and even occasional death of the patient. Another problem on the part of treating the surgeon is defamation and medicolegal issue. We report a case of a 25-year young man presented with pain in abdomen and vomiting for six months, History of a lump in the right lumbar region for two months and with constipation for five days. He had operated for splenectomy after a blunt injury to the abdomen eight months back. On clinical examination, adhesive obstruction of bowel was suspected. On computed tomography, (CT), a foreign body was revealed. On laparotomy, there was evidence of sponge in a jejunum. By doing enterotomy, a large sponge was removed. Postoperative recovery was not associated with significant complications. An essential precaution is to look for retained foreign body and confirmation before the closure of any body cavity, as there may even after all precautionary exercises, occur retention of foreign bodies. Hence consider always the possibility of gossypiboma in the differential diagnosis of chronic abdominal pain or a mass in patients with a history surgery.



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INTRODUCTION

Worldwide around twenty crores of significant surgeries are done. Foreign body (FB) retention is not a common complication of surgery. Obviously it

is not welcoming and can affect the health of the patients and the fame of the surgeon adversely. The incidence is scarce around 0.01%-0.001%, and in 80% of these cases, a surgical sponge is a cause, called a gossypiboma (Patil *et al.*, 2017).

If the FB is left in the abdomen, it is having two fates depending on the inflammatory process induced by it. Two types of inflammatory responses were observed one is exudative, and the other is fibrinous. In exudative it may result in the transmigration of FB in the lumen of bowel or faecal fistula, and fibrinous type FB become encapsulated (Agrawal and Gupta, 2018).

Case report

A case of a twenty-five-year-old young man presented with abdominal pain, on and off vomiting for six months, besides, the History of a lump in the

right lumbar region for two months. He reported of fever for fifteen days and constipation for five days. He was operated for splenectomy after a blunt injury to the abdomen eight months back. On clinical examination, the patient was severely anaemic (haemoglobin 6gm%). There is evidence of six cm by eight cm lump in left iliac fossa extending into epigastrium and left lumbar region. The rectal examination was normal and empty. Adhesive obstruction of bowel was suspected. On CT evaluation, a FB was suspected along with small bowel obstruction. The patients' condition was optimised by correcting anaemia, hypoproteinaemia, and dehydration with appropriate treatment. On laparotomy, there is evidence of jejunal obstruction with dilated loops. Obstruction to jejunal lumen was because of sponge in it. Evidence of severe adhesions was present. Sponge containing a loop of jejunum was densely adherent to rectosigmoid junction. By doing enterotomy, a large sponge was removed. Simultaneously decompression of jejunum was performed. All adhesions were carefully lysed. Around one foot of jejunum containing sponge was dilated and unhealthy was resected and end to end anastomosis performed. (Figure 1, Figure 2, Figure 3)

Postoperative recovery was not associated with minor surgical site infection and wound gape treated with the resuturing of a wound.



Figure 1: Sponge in the lumen of the jejunum

DISCUSSION

In 1884 first case of a retained sponge was reported by Wilson. The most common site was abdomen, that is the (56%), the next one the pelvis (18%) and then the thorax (11%). Agrawal V et al. reported a case of retained sponge post abdominal hysterectomy. There is evidence of transmigration of the sponge that was present in the jejunum. It is similar to the present case.

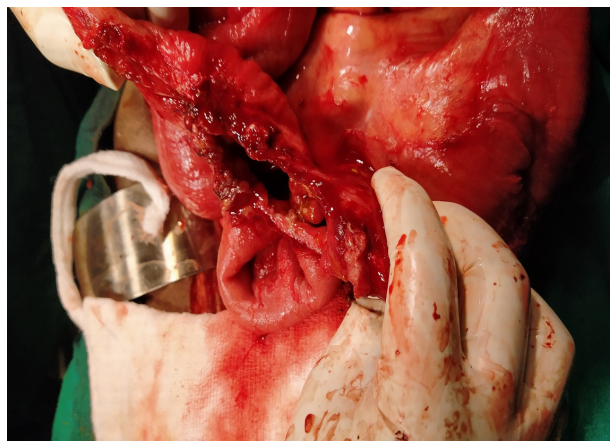


Figure 2: Enterotomy after removal of sponge

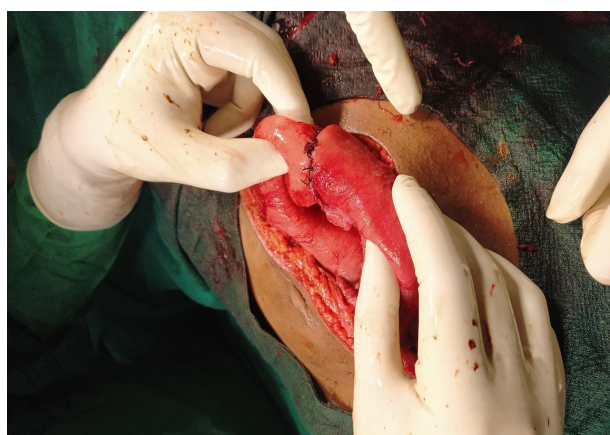


Figure 3: Completed end to end anastomosis

[Patial et al. \(2017\)](#) found transmural migration in 36 cases. But the [Zantvoord et al. \(2008\)](#) reported in 65 cases in a worldwide systematic review. The most common site of migration is the intestine (75%). [Zantvoord et al. \(2008\)](#) reported 2 cases of stomach migration and 7 of urinary the bladder. Five more cases have diaphragmatic migration into the thorax. Only in 4 cases sponge passes through the rectum, in more than 92% of patients with retained foreign bodies needed surgery. The authors strongly recommend the use of radiopaque sponges.

[Rajković et al. \(2010\)](#) reported a case of a 66-year-old man being evaluated for chronic lumbar pain and suspected to have a tumour on ultrasonography. There is evidence of round shaped paravertebral mass of 10 cm in diameter. His History was not significant except surgery done for stab injury in the abdomen 40 years ago. An exploratory laparotomy was done and was found to have fibrous cocooning of retained cotton sponge. This usually happens because of the fibrinous response of the body to a preserved foreign body. The authors describe three risks of retained sponge. They are emergency

intervention, unplanned events during surgery, and patients with high body mass index.

Aggarwal (2013) describes a retrospective review of three cases of retained sponges out of 2,075 trauma surgeries over eight years, for an incidence of approximately one in 700. He describes guidelines to prevent retained sponges after surgeries. Multidisciplinary participation is required to improve the safety of the patient. The first step is counting of instruments and sponge before and after surgery and maintaining the same surgical team and assistant during procedures, making zero communication gap between team members—new technologies like the use of radiopaque sponges with intra-operative and postoperative radiography.

Mcintyre et al. (2010) describe 3 cases of retained sponges over two years that lead to new guideline implementation to prevent them. In the first case-patient of a 56-year-old man was operated for Fournier's gangrene for multiple times and by numerous different surgical teams. One team put cotton surgical sponge to arrest bleeding, and there is a communication gap between the groups. This results in a return of the patient after six weeks for a retained sponge. The second case was of the blunt abdomen with hemoperitoneum treated by laparotomy and packing with radio-opaque tagged sponges. A radiograph was taken to rule out retained sponge. The radiograph did not show any sponge or retained foreign body.

The patient was undergone computerised tomography (CT) of the abdomen for a complete evaluation of internal injuries on the second postoperative day found to have retained cotton sponge. The third case was of a young girl with blunt abdominal injury again treated with packing and radiograph with a radio-opaque sponge, still failed to identify retained sponge. In both these cases, there is not a complete visualisation of the whole abdomen.

Susmallian et al. (2016) report a case of the retained sponge after nine years of caesarean section. The patient presented with chronic abdominal pain. On examination, there is no evidence, either lump or obstruction. On CT retained FB was found. An encapsulated cotton sponge was removed on laparotomy with uneventful postoperative recovery.

CONCLUSION

An essential precaution is to look for retained foreign body and confirmation before the closure of any body cavity. As even after all precautionary exercises, the retention of foreign bodies can occur. Hence consider always the possibility of gossypiboma in the differential diagnosis of chronic abdominal pain or a mass in patients with a history surgery.

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Conflict of Interest

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