

A RARE CASE OF GOSSYPIBOMA SHOWING TRANSMURAL MIGRATION TO THE SMALL BOWEL

General Surgery

Dr Divesh Bhardwaj

Resident General Surgery, Maharishi Markandeshwar Institute Of Medical Sciences (MMIMSR) Mullana, Ambala, Haryana, India

Dr Anand Thawait

MBBS, MS(GENERAL SURGERY), FIAGES, FMAS, FCLS, FALS, FACS(USA), FAIS, FISCIP, Professor and Head of unit, Dept. of General Surgery, Maharishi Markandeshwar Institute Of Medical Sciences (MMIMSR) Mullana, Ambala, Haryana, India

Dr. Shivani P.K.

Resident - General Surgery, Maharishi Markandeshwar, Institute Of Medical Sciences (MMIMSR) Mullana, Ambala, Haryana, India.

ABSTRACT

The most common surgically retained foreign body is the surgical mop or surgical sponge. The clinical presentation of a retained sponge can vary from an incidental finding on plain radiograph to an intense inflammatory response with obstruction or perforation¹. In this case report, we are going to discuss the case of a 36 year old lady presenting to the emergency room with obstructive symptoms. The patient underwent exploratory laparotomy after undergoing CT imaging, which had raised the suspicion of a foreign body in the distal small bowel. The retained surgical sponge was extracted from the small bowel. Retained surgical mops following surgery is an avoidable but serious complication. They are seldom reported because of medico-legal implications but clinicians need to be aware about varied presentations of this entity to avoid unnecessary morbidity. Transmural migration to the lumen of the bowel is a very rare occurrence

KEYWORDS

Retained surgical sponge, obstructive symptoms, distal small bowel

INTRODUCTION

The term "gossypiboma" denotes a mass of cotton that is retained inside the body following surgery². It is a serious but avoidable complication of surgery. Its real incidence remains unknown because reporting of this entity is often suppressed due to fear of coverage by print as well as electronic media, medico-legal implications and adversely affecting the reputation of the surgeon.

It has varied clinical presentations and often causes difficulty in the diagnosis. We report the case of a 36-year-old woman who presented with complaints of pain abdomen and obstipation since 1 week and the mop was found in the lumen of the distal ileum. Intraluminal migration of the surgical mop is a very unusual complication³.

Case study

A 36 years old female was brought to the emergency room with complaints of pain abdomen since 1 week and a history of obstipation since 1 week. Patient also had a history of loss of appetite since past 10 days. Patient had undergone open surgery 4 months back, through pfannenstiel incision for retained products of conception, but there were no operative records or any other documents supporting this history or the details of the medical termination of pregnancy. On arrival, patients pulse rate was in the range of 100-110/min, BP was 94/60 mm Hg. Patient was able to maintain saturation on room air and was afebrile on examination. Abdominal examination revealed a soft and mildly distended abdomen with tenderness in the hypogastric and umbilical region. Plain radiograph of abdomen in erect position showed air under both the domes of diaphragm and distended small bowel loops suggesting intestinal perforation peritonitis.

Patient also underwent a contrast enhanced computerised tomography scan (CECT) which was suggestive of a curvilinear high density foreign body with a mean HU value of 1061, seen in mid ileum as an oblong intraluminal lesion with multiple mottled air lucencies.

Intraoperative findings-

- Dilated bowel loops of jejunum and ileum seen on tracing the small bowel from duodeno-jejunal junction to ileo-caecal junction
- Transition zone seen 50 cm proximal to the ileo-caecal junction, with a hard intraluminal foreign body lying distal to this point in the ileum
- Retained surgical mop extracted from the ileum with a longitudinal incision which measured approximately 15 x 15 cm after unfolding
- Adhesiolysis was done for adhesions between ileal loops and uterus

- An end ileostomy was made and distal ileal loop was closed
- A thorough peritoneal wash with 6 litres of Normal Saline was given

Post-operatively patient was not extubated. She went into a state of unresuscitable shock and was declared dead 36 hours post-surgery.

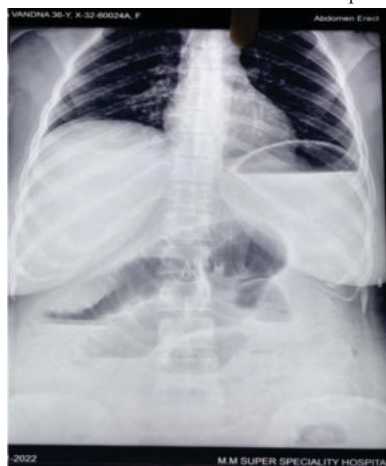


Fig 1 showing X-Ray Abdomen erect showing air under both domes of diaphragm and dilated loops of small bowel

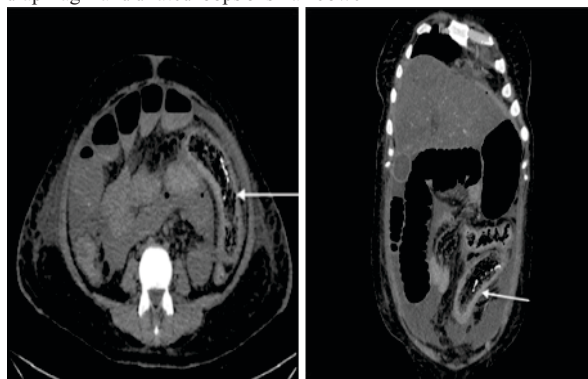


Fig. 2a & 2b - Axial and coronal sections of CT scan abdomen revealed dilated jejunal and proximal ileal loops with an elongated

intraluminal mid ileal lesion showing multiple mottled air lucencies with curvilinear high-density structure embedded within it, which suggests retained sponge.

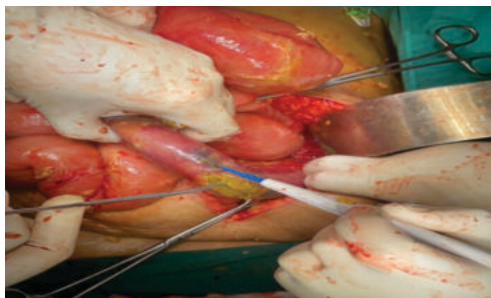


Figure 3a Longitudinal incision being given along the anti mesenteric border ileal loop



Figure 3b Picture showing the retained surgical sponge after its extraction from the lumen of ileum

DISCUSSION

It occurs once in 100-5000 of all surgical interventions and one per 1000-1500 for all intra-abdominal operations, although this represents only tip of the iceberg. Other uncommon sites reported are chest, extremities, CNS and breast. Gynaecological surgery is responsible for retained sponge in more than half of surgical cases⁴ (53%).

The non-absorbable material of a retained surgical foreign body triggers two types of reactions. The first one is an aseptic fibrotic reaction which leads to adhesions and encapsulation, resulting in granuloma formation. Patients with this response are at risk for pseudo tumour formation and subsequent symptoms related to obstruction. The second one is exudative in nature, which can lead to abscess formation, with or without secondary bacterial sepsis. A sinus tract or fistula may develop in an attempt to extrude the foreign body either externally or it may invade into a hollow viscus. Patients become symptomatic when the foreign body erodes into the bowel or vessels or by causing fistulae, abscesses, obstruction, bleeding or chronic pain. Transmural migration of sponges is rare. Dhillon and Park suggested that any retained foreign body for a long time will lead to inflammatory reaction followed by formation of the abscess pouch, resulting in destruction of the neighbouring tissues¹. This along with gut peristalsis may be responsible for the transmural migration of the retained laparotomy sponge, which was responsible for the obstructive symptoms.

Wilson et al was the first one to report a case of gossypiboma in 1884. According to him, there are some precautions that need to be followed at all times. It is important to count the sponges as well as the instruments used in the surgery, and keeping a record of the same, so that there is no doubt as to the number used, for an exact tally at the end. As few instruments and sponges as possible should be used in every operation. The operator should do his own sponging, and should always have a fixed number in use. They should be handed to the operator as the way he wants it by a good assistant. Sponges used should be undivided, and a sponge should never be allowed to be

divided during the operation. One of the chief duties of the first assistant is to watch the chief operating surgeon and see that, amidst the excitements and terrors of an operation, no foreign body is left behind before the closure⁵.

CONCLUSION

Gossypiboma is rarely reported because of the long latent period of clinical manifestations of retained sponges and hence low index of suspicion. The actual management is usually delayed as correct diagnosis is difficult. If diagnosed early, morbidity can be reduced by timely intervention. Adequate precautions should be taken to prevent this untoward complication.

REFERENCES

1. Dhillon JS, Park A. Transmural migration of a retained laparotomy sponge. *Am Surg.* 2002 Jul;68(7):603-5. PMID: 12132741.
2. PatilKK, Patil SK, GoradKP, PanchalAH, Arora SS, Gautam RP. Intraluminal migration of surgical sponge: gossypiboma. *Saudi J Gastroenterol* 2010;16:221-2.
3. Zantvoord Y, van der Weiden RM, van Hooff MH. Transmural migration of retained surgical sponges: a systematic review. *ObstetGynecolSurv* 2008;63:465-71.
4. Chopra S, Suri V, Sikka P, Aggarwal N. A Case Series on Gossypiboma - Varied Clinical Presentations and Their Management. *J Clin Diagn Res.* 2015 Dec;9(12):QR01-3. doi: 10.7860/JCDR/2015/15927.6978. Epub 2015 Dec 1. PMID: 26816953; PMCID: PMC4717758.
5. Wilson C.P. Foreign bodies left in the abdomen after laparotomy. *Gynecol. Tr.* 1884; 9:109-112