CASE REPORT

MIGRATORY GOSSYPIBOMA: AN UNUSUAL PRESENTATION OF A RARE SURGICAL COMPLICATION

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Gossypiboma is a rare surgical complication associated with significant patient morbidity and even mortality. Migratory gossypiboma is a rarer subset of these cases, representing the erosion of surgical sponge into the intestine with consequent complications. A 40 years old female presented with a surgical sponge that had eroded into the caecum and subsequently moved with peristalsis up to the anal canal from which it was protruding out at the time of presentation. Proper checking before surgical closure can prevent this serious potentially life-threatening complication.

Keywords: Gossypiboma; Retained surgical sponge; Intraluminal migration

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INTRODUCTION

The term gossypiboma is used to describe a surgical sponge left accidently inside the body during a surgical procedure. It is derived from the Latin word *Gossypium* (cotton) and Swahili word *boma* (place of concealment).[1] Its true incidence is unknown but is estimated to vary from 1 in 3000 to 1 in 100 surgeries.[2] Radiology plays a vital role in its diagnosis with plain radiographs, ultrasound, CT and MRI all providing useful clues.[3] Since the clinical and radiological manifestations are variable and mimic tumours and abscesses, early and accurate diagnosis is essential to prevent patient morbidity and mortality.

This report describes migratory gossypiboma, a rare form of the condition in an adult female.

CASE REPORT

A 30 years old female presented to outpatient department with history of non-healing wound of C-section done 6 months back at periphery along with discharge from the incision site. She also complained of feeling of something coming out of anus which she was unable to expel for the last 1 month. She was non-diabetic, immunocompetent with no signs of nutritional deficiency and there was no factor in history to account for the non-healing of wound. She had history of on and off fever as well.

On examination, the incision site showed redness and was tender on palpation. There was pussy discharge from the right site of wound as well. Further examination revealed that there was a sponge that was protruding out from the patient's anal canal. However, it seemed to be adherent and could not be pulled out. To find out the site of adherence of sponge, a CT scan of abdomen and pelvis with intravenous contrast was planned.

The CT scan revealed a mixed density heterogenous mass with spongiform gas pattern in the rectum and anal canal (Figure-1A). A linear shaped low-density Figure-1B) extended proximally from it up to the ascending colon with the colon 'draped' over it. In addition, the ascending colon and caecum appeared hazy and were indistinctly outlined with oedematous walls (Figure-1D). These findings were consistent with gossypiboma located in rectum but extending proximally up to ascending colon and distally protruding out from anus (Figure 1C) along with inflammation of proximal part of colon.

Subsequently, the patient was scheduled for a laparotomy. Preoperatively, it was discovered that the proximal end of the sponge was located in the peritoneal cavity in the region of right iliac fossa with necrosed caecum and ascending colon. The sponge was dissected out and limited colectomy was done with formation of colostomy stoma. The findings showed that the sponge placed in right iliac fossa had eroded into the caecum and subsequently migrated with peristalsis up to the anal canal and even protruded out, however due to the adhesions it could not be expelled out. This was consistent with the diagnosis of a migratory gossypiboma. Post-operative course was uneventful with the patient discharged home in stable condition on 5th post op day. Subsequently, colostomy was closed surgically 6 months later.

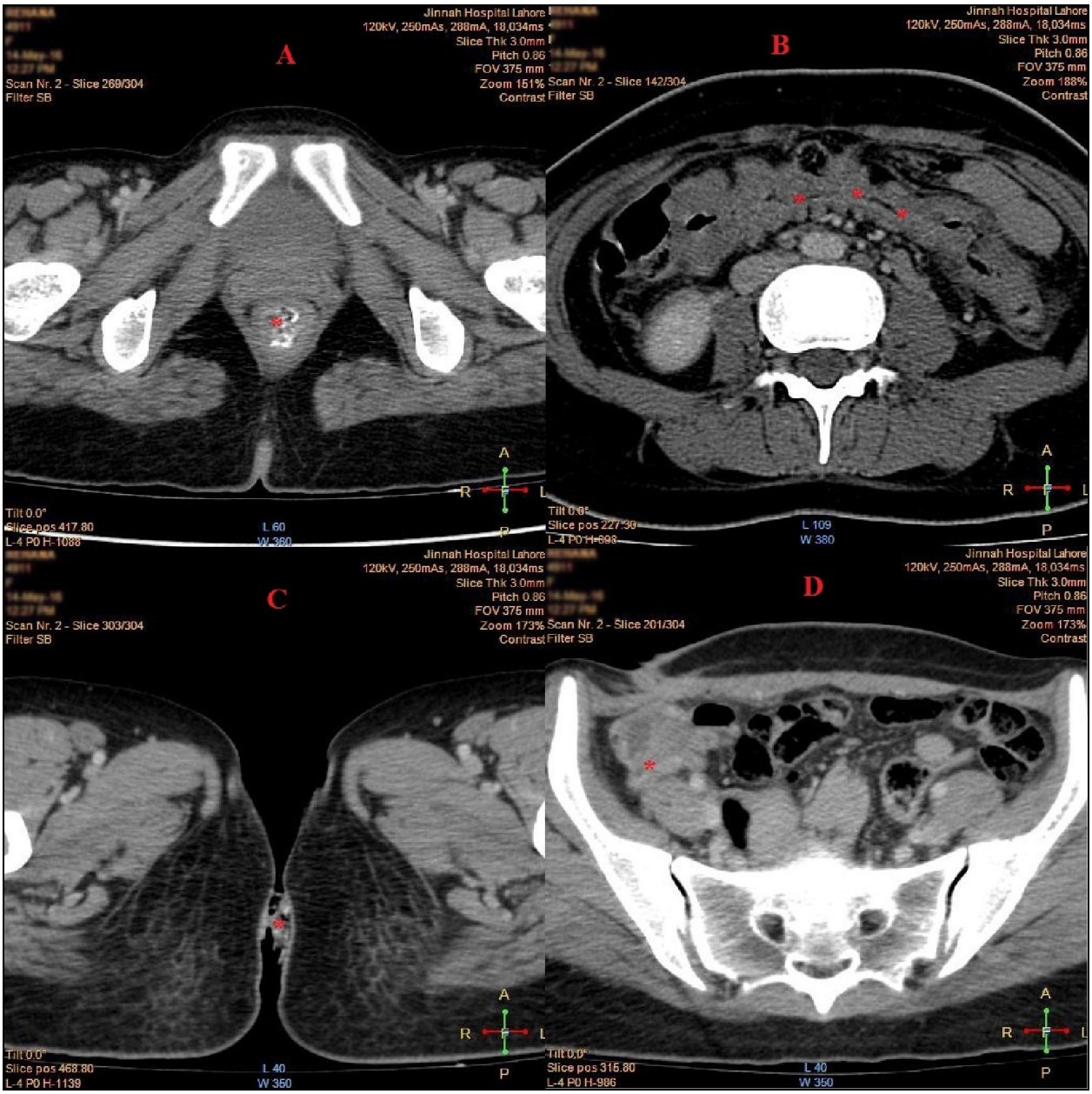

Figure-1: Axial post contrast CT scan slices showing A: Heterogenous density mass in rectum, B: Linear low density in transverse colon, C: Sponge protruding out through anal canal, D) Oedematous caecum

DISCUSSION

Gossypibomas, which consist of a cotton matrix surrounded by foreign body granuloma, account for up to 80% of foreign bodies retained following surgery.[4] However, the condition is a rare entity and even the cases that occur mostly go unreported due to medicolegal implications.

The usual response of the body to retained sponge is either an exudative reaction leading to abscess formation or a fibrotic reaction resulting in formation of a mass.[5] Migration of the retained sponge into bowel is relatively rare.[6] Infact, only 45 cases of transmural migration of surgical sponges following abdominal surgery have been reported from 2000 to 2010.[7]

The intestinal tract represents a weak line of resistance through which defence mechanisms in peritoneal cavity attempt to expel a retained surgical sponge.[8] The sponge may migrate into ileum without any apparent opening. Once there, it may impact at ileocecal valve or if it passes through, it may be easily discharged through anus.

The diagnosis of gossypiboma remains a challenge as it can simulate a number of conditions

clinically and radiologically. Out of all the imaging modalities, CT is the most common detection method (61%) and should be the first modality to rule out gossypiboma.[9] At CT, gossypibomas are generally identified as a mass with well-defined contours, with soft tissues density, high or even mixed densities, sometimes containing air bubbles and high density capsule that may present enhancement in the post-contrast phase.[10] A low density mass with prominent rim enhancement is also referred to as CT whirl sign and may suggest a retained surgical sponge granuloma.[11]

However, a high index of suspicion is required to avoid misdiagnosis Moreover, the principle - prevention is better than cure – cannot be stressed enough to decrease the morbidity and mortality associated with this condition. Proper implementation of WHO Surgical Safety Checklist can help in this regard.

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