SPONTANEOUS TRANSMURAL MIGRATION OF SURGICAL SPONGE CAUSING COMBINED SMALL AND LARGE BOWEL OBSTRUCTION – A RARE PRESENTATION OF GOSSYPIBOMA.

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Abstract

INTRODUCTION : A retained surgical sponge in the abdomen is uncommon although it is likely that this finding is underreported in the medical literature. The intravisceral migration of retained surgical gauze is even rarer, as demonstrated by the very few cases reported.

CASE PROFILE : Nine months after undergoing abdominal hysterectomy, a 50 year old female presented with abdominal lump and recurrent episodes of intestinal obstruction. USG AND CECT revealed presence of mixed echogenic mass in region of sigmoid colon and Sigmoidoscopy confirmed the diagnosis of intraluminal Gossypiboma. Laparotomy entailing double bowel resection revealed retained surgical sponge partly occluding sigmoid colon and ileum lumen.

CONCLUSION : Gossypiboma should be considered in the differential diagnosis of acute mechanical intestinal obstruction in patients who underwent laparotomy previously. Use of radio opaque sponges, continuous medical training and strict adherence to regulations should reduce the incidence to a minimum.

KEYWORDS: Gossypiboma, surgical sponge, spontaneous transmural migration.
INTRODUCTION –

Gossypiboma (from Latin “gossipium” cotton and Kiswahili “boma” place of concealment) or retained surgical sponge is the most common surgically retained foreign body (69%). Recognition of a postoperatively retained foreign body is often delayed either because of medico legal implications or because of confusing clinical presentation and nonspecific imaging features. Spontaneous Transmural migration of a retained sponge after laparotomy with or without symptoms of peritonitis and obstruction is very rare. We report one such interesting case wherein retained sponge presented 9 months post hysterectomy with recurrent intestinal obstruction and abdominal lump. Laparotomy revealed complete intravisceral migration of sponge involving both sigmoid colon and ileum.

CASE PROFILE –

A fifty year old female with a history of abdominal hysterectomy, done at a peripheral health centre nine months back, admitted with complaints of gradually increasing lump in left lumbar region for last three months accompanied by recurrent subacute intestinal obstruction and pain abdomen.

USG revealed a large, mixed echogenic mass in region of sigmoid colon. CECT abdomen demonstrated low density mass with multiple speckled gas bubbles within mass, adherent to and partly occluding sigmoid colon lumen. Patient subjected to Sigmoidoscopy which confirmed the presence of intraluminal retained sponge, partly occluding sigmoid colon lumen and could not be extracted.
With provisional diagnosis of intraluminal retained sponge, patient operated. On laparotomy, mass found in region of sigmoid colon with densely adherent small bowel loops. After all attempts to free small bowel loops from mass failed, double intestinal resection was done and sigmoid colectomy with adherent ileal loop resected and primary anastomosis was done in two layers.

Examination of resected specimen revealed cotton sponge which had migrated transmurally into colon first and subsequent adherence and migration into ileal loop causing recurrent intestinal obstruction. Apparently an inflammatory response created an abscess pocket around the sponge between the abdominal wall and the sigmoid colon resulting in perforation of sigmoid colon. Through this opening the sponge migrated into the lumen of the sigmoid colon and subsequently ileal loops were adherent to this site with gradual transmural migration of sponge partially into ileal loop without features of overt peritonitis.

Post-op recovery of the patient was asymptomatic and was discharged on sixth post-op day.
Fig. 1 – RESECTED SPECIMEN SHOWING SIGMOID COLON AND ILEAL SEGMENT WITH TRANSMURALLY MIGRATED SURGICAL SPONGE SEEN PROTRUDING FROM BOTH ENDS OF ILEUM
Fig. 2 – RESECTED SPECIMEN WITH RETAINED INTRALUMINAL SURGICAL SPONGE SEEN PROTRUDING FROM DISTAL END OF SIGMOID COLON AS WELL AS BOTH ENDS OF ILEAL SEGMENT
DISCUSSION –

The incidence of a surgical sponge retained at operation is difficult to estimate, but it has been reported as 1 in 100 to 3000 for all surgical interventions and 1 in 1000 to 1500 for intraabdominal operations\(^1\). Retained sponges are more common in obese patients and after emergency surgery\(^2\). A postoperatively retained cotton surgical sponge, although clinically inert, may elicit two types of reactions in the body - fibrinous response creating adhesions and encapsulations resulting in a granuloma or pseudotumour, also referred to as gossypiboma, and the other being the exudative response leading to abscess formation with or without superinfection and fistula formation\(^3,4\).

Clinical symptoms may be various and closely connected to the subsequent destination of the textile aid. Abscess formation with peritonitis or systemic septic symptoms has been reported to occur in 16.7% of the cases, hemoperitoneum secondary to a vessel lesion or a Pseudotumor in 8.3% and intestinal obstruction in 58.3% of the cases\(^5\). Moreover it has been reported that the interval between the probable causative operation and the diagnosis of retained gauze may range from 11 days to 28 years\(^6\). Septic complications present earlier in the postoperative period while aseptic encapsulation may go undetected for years. In a rare presentation, retained surgical sponge has been reported to be expelled per rectum as long as 5 years after surgery\(^7\). The low index of suspicion due to the rarity of the condition and the long latency in the manifestation of the symptoms frequently result in misdiagnosis (or even missed diagnosis) leading to inordinate delay in proper management.

Radiological diagnosis of retained surgical foreign bodies without radio-opaque markers may be extremely difficult. Ultrasound usually gives a clue to the diagnosis while spiral CT is almost confirmatory. Linear densities with peculiar infolding/whorled (spoke-wheel)
configuration suggest a towel as the cause\textsuperscript{8,9}. On the other hand, sponges as well as gel foam tablets appear as low-attenuation masses with multiple gas bubbles\textsuperscript{10}. Speckled gas within a mass at the site of surgery should strongly suggest foreign body as a possible aetiology\textsuperscript{8}.

Timely surgical intervention is possible only if there is awareness of such a condition. Early recognition of this entity will assist in prompt institution of appropriate treatment, reducing morbidity and mortality in these patients. Use of radio opaque sponges, continuous medical training and strict adherence to regulations should reduce the incidence to a minimum.

**CONCLUSION –**

In conclusion, gossypiboma has to be considered as a strong diagnostic possibility in postoperative patients presenting with unexplained symptoms such as pain and intestinal obstruction. Strict adherence to swab counts, and the avoidance of change of staff during procedures is important in decreasing the incidence. Perhaps, with the increasing use of minimally invasive procedures, the incidence of gossypiboma will fall dramatically\textsuperscript{11}.
BIBLIOGRAPHY –


