

Gossypiboma: A Cause of Iatrogenic Fecal Enterocutaneous Fistula

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ABSTRACT

The word ‘gossypiboma’ or ‘textiloma’ is used to describe a retained surgical sponge in the body after an operation. If it is left in the abdomen, it may cause serious morbidity and mortality of the patient as well as medico legal problems. It varies between 1 out of 1000-1500 intra-abdominal operations and 1 out of 300-1000 of all operations¹. Herein, we report one case, the first presenting about 2 months after caesarean section with fever with chills and rigor and pain at the operative area. Imaging detected presence of foreign body in the abdomen. Then she went for exploration of the wound and a mop was removed. After that she came to us with pain and feculent discharge from the wound site.

Keywords: Gossypiboma, retained surgical sponge, textiloma, fistula.

Introduction

Post-operative retained sponge (variously referred to as gossypiboma, textiloma, or gauzioma) has been estimated to occur once in 100-3000 surgeries and once in 1000-1500 laparotomies even though many cases are not reported to avoid medico legal consequences²⁻⁵. This misadventure continues to plague surgical practice because preventive measures which should be routine are either not taken lightly in many theatres or dispensed with altogether. Retained abdominal sponges not detected and removed immediately after surgery may present as a spectrum of manifestations^{2-3, 7-10}, some of which are life threatening. In acute cases, abscesses and intestinal fistulae dominates while chronic forms are characterized by aseptic masses which may remain asymptomatic or present years later. The bowel often bears the brunt of attempt to expel the foreign body resulting in intestinal complications like paralytic ileus, perforation, fistula and intestinal obstruction. Clinical suspicion of post laparotomy retained sponge

may be relegated to the background where awareness is low because the manifestations are more likely to be confused with commoner post-operative complications. We present the case of a lady who had acute presentation with fistula after removal of sponge following Caesarean section.

Patient and Observation

Mrs. X is a 27 year old married woman who got admitted in our hospital (AKMMCH) for foul smelling discharge through a wound which was located at the left side of a transverse /Pfannenstiel scar. She had a history of LUCS on 05.06.2020, 3 days later she developed fever which was continuous in nature and more raised at night. Chills and rigor were present. Highest recorded temperature was 103°F which was subsided by taking medications. She also had pain at the operative area. Then she was admitted in another hospital and on 30.07.2020, they explored the wound and removed foreign body

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(Mop). In the immediate post-operative period there was pain and feculent discharge from left side of the wound and she got admitted in this hospital for further management. She had her first menses at 14 years of age and her menstrual cycle was regular at 28 days. She is normotensive, non-diabetic, and non-asthmatic. All of her family members are in good health. She maintains good personal hygiene. She transfused 10 units of blood in this period. On physical examination, the general condition was good and vital parameters were as follows: a blood pressure of 100/60 millimeters of mercury, a respiratory rate of 20 cycles per minute, a pulse rate of 100 pulsations per minute and a temperature of 99°F. At the head, neck and chest, the physical findings were normal. There was a scar corresponding to Pfannenstiel's incision and an opening at the left side of the scar discharging fecal substance. Abdomen was slightly distended, no abdominal mass was present. Bowel sound was present. The working diagnosis was enterocutaneous fistula. The following work up was done: the full blood count showed a moderate hypochromic and normocytic anaemia and normal leucocytes and platelet count. CT scan showed remarkable air collection with air fluid level in anterior wall of lower abdomen, communicating with peritoneal cavity and skin surface. Herniation of small bowel loop in to the anterior and right lateral abdominal wall. Inflammatory changes were present in adjacent soft tissues. After counseling and informed consent, laparotomy was carried out through right paramedian incision and on laparotomy, ileum was found completely transected, eroding the neighbouring omentum and intestinal loop. There was some intraperitoneal collection. Two ends of the bowel loops were exteriorised. Thorough peritoneal wash was given and abdomen was closed by keeping two drains in situ (Fig.1). Her post-operative period was uneventful and she was discharged.

On 01.11.20, patient was re-admitted for restoration of gut. We performed stapled ileostomy closure for the first time in this hospital on 05.11.20. Post-operative period was uneventful and the patient was discharged on 09.11.20.



Fig. 1: Showing Right Paramedical Incision and Oldincision

Discussion

Risk factors of textiloma include: emergency surgery, unexpected change in surgical procedure, high body mass index, change in nursing staff during procedure, female sex, high volume of blood loss, high surgical risk, increased number of peri-operative personnel involved, increased number of specialty teams involved. The patient in the present report underwent a Caesarean section in a thana level clinic. The final count of surgical items was not done at the end of the surgery and no sign out form was filled. This denotes a very common surgical malpractice or mistake in our setting. Indeed there is no clear policy for instruments, sponges and needles counts. Moreover the operating room manager who also stands as quality coordinator is not always present during procedure^{10,11}.

The laps of time between casual surgery and the discovery of the forgotten textile material (sponge/swab/towel/gauze) vary from few minutes to forty years. The most frequent locations of textiloma are: the abdomen (56%), the pelvis (18%) and thorax (11%)^{12,13,14}. Retained surgical sponge consists of a cotton matrix that undergoes several changes in the body; the first day it triggers an exudative inflammatory reaction which can remain aseptic on one hand, leading to a granulation tissue after one

week and to a fibrous envelope two weeks later; calcification and encystment can occur. On the other hand, that initial exudative inflammatory site can get infected and form abscess^{10,15}. Symptoms depend on the location and the possible migration of the retained gauze /mop and the type of the local tissue reaction (infectious or aseptic); infectious reaction leads to early manifestation and recognition of the condition whereas in case of aseptic reaction, the diagnosis can be made several decades later. Manifestations of abdominal and pelvic textiloma include fever, nausea, pain, mass, digestive fistulas, intestinal occlusion, abscess, peritonitis, foul smelling vaginal discharge¹⁴. Discrepancies in surgical counts can lead to early recognition of a retained sponge by radiography in the operation room in case the sponge has a radio-opaque marker^{16,17}. In case we herein report no surgical count was reported in the post-operative note.

Our patient presented to us with a discharging wound in the left side of the abdominal scar with a history of removal of a mop 5 days before and before that she had a history of Caesarean section. She went to a doctor with abdominal pain, fever and discharge from her wound site. That doctor performed a laparotomy and removed the mop but symptoms did not subside and discharge became feculent and larger in amount. After 5 days of her removal of mop, she came to us with enterocutaneous fistula.

Surgical removal of the forgotten sponge is the cornerstone of textiloma case. This procedure can be done by laparotomy or by laparoscopy. Laparoscopic retrieval of textiloma is indicated in selected cases where there are no complications where the forgotten swab is small and encapsulated¹⁶.

Outcome after ablation of textiloma is often favourable. Morbidity is mainly due to complications. Mortality rate reported in literature is 18.9%. True mortality rate may be higher because fear of litigation prevents practitioners from reporting deaths due to this medical mistake¹⁷.

Conclusion

Forgetting a textile surgical item (sponge, gauze or towel) on the surgical site is a rare but serious medical

mistake. Prevention can easily be achieved by adapting and implementing policies of systemic count of surgical items in operating rooms and by using only radio-opaque sponges. Textiloma is the differential diagnosis of all abdominal and pelvic masses and occlusive syndromes in patients with previous surgeries and those sites should always be considered. Hiding the diagnosis to a patient and her family is not ethically correct but the team did not want to leave space for claim. We must be more careful about the count of compresses and other instruments before, during and after surgery. This avoids the cost associated with morbidity and prosecution.

Authors' contributions

Prof. Abdus Salam Arif was in charge of overall supervision and management of the patient and performed the surgery and edited the main script. Dr. Md. Sofiul Alam followed up the patient peri-operatively, prepared and wrote the main script. Dr. Fariha Anam collected the detailed history and documents and followed up the patient. Dr. A. T. Tahmid and Dr. K.N. Maria followed up the patient post operatively. All the authors have read and approved the final version of the main script.

Conflict of interest: None.

Reference

1. Jain S, Jain S, Jain V, Jain M. Gossypiboma: Contrast-enhanced computed tomography for detection and foolproof management. *J Med Soc* 2014; 28:40-2.
2. Custovic Rk, Krolo I, Marotti M, Babic N, Karapanda N. Retained textilomas occur more often during war. *Croatian Medical Journal*, 2004;45:422-426.
3. Macario A, Morris D, Morris S. Initial Clinical Evaluation of a Handheld Device for Detecting Retained Surgical Sponges Using Radiofrequency Identification Technology. *Arch Surg* 2006; 141:659-662.
4. Gencosmanoglu R, Inceoglu R. An unusual cause of small bowel obstruction: Gossypiboma-case report. *BMC Surgery* 2003; 3:6.
5. Jebbin JM, Adotey NJ, Gossypiboma: A report of 2 cases. *Niger J Med* 2006; 15:87-8.

6. Gonzalez-Ojeda A, Rodriquez-Alcantar DA, Arenas-Marquez H, Sanchez Perez-Verdia E, Chavez-Perez R, Alvarez-Quintero R, Perea-Sanchez A. Retained foreign bodies following intraabdominal surgery. *Hepatogastroenterology* 1999; 46:808-12.
7. Hyslop JW, Maull KI. Natural history of retained surgical sponge. *South Med J* 1982;75:657-60.
8. Tacyildiz I, Aldemir M. The mistakes of Surgeons: "gossypiboma". *Acta Chir Belg* 2004;104:71-5.
9. Ahmad G, Attiq-ur-Rehman S, Anjum MZ. Retained sponge after abdominal surgery. *J Coll Physicians Surg Pak*. 2004;13:640-3.
10. Godara R, Marwa S, Karwasra RK, Goel R, Sen J, Singh R. Spontaneous transmural migration of surgical sponges. *Asia J Surg* 2006; 29:44-51.
11. Rowlands A. Risk factors associated with incorrect surgical counts. *AORN J*. 2012; 96 (3):272-84.
12. Andronic D, Lupascu C, Torcoveanu E, Georgescu S. Gossypiboma-retained textile foreign body. *Chirurgia (Bucur)*. 2010; 105(6):767-77.
13. Rajovic Z, Altarac S, Papes D. An unusual cause of chronic lumbar back pain: retained surgical gauze discovered after 40 years. *Pain Med*. 2010; 11(12):1777-9.
14. Wan W, Le T, Riskin L, Macario A. Improving safety in the operating room: a systemic literature review of retained surgical sponges. *Curr Opin Anaesthesiol*. 2009; 22(2):207-14.
15. Lauwers PR, Van Hee RH. Intraoperative gossypibomas: the need to count sponges. *World J Surg*. 2000;24(5):521-7.
16. Torcoveanu E, Dimofte G, Georgescu S, Vasilescu A, et al. Laparoscopic retrieval of gossypibomas-short series and review of literature. *Acta Chir Belg* 2011;111 (6):366-9.
17. Issam Serghini, Abdelghani El Fikri, Jaafar Salim Lalaoui, Mohamed Zoubir, Mohammed Boughanen. Abdominal textiloma: report of a case. *Pan Afr Med J*. 2011;9:10.