

SURGERY CASE REPORTS: ADVANCES AND TECHNIQUES ERRONEOUS SURGERIES: TWO CASE REPORTS OF GOSSYPIBOMA IN PAKISTAN

MUHAMMAD USMAN¹, NAEEM SARWAR², SHAHZEENA KALEEM³, TAYYABA HAMID⁴, ASGHAR ALI⁵, KHALIL-UR-REHMAN⁶

^{1,3,4} House Officer, Surgical Unit II, AMTH. ²Senior Registrar Surgical Unit II, AMTH. ⁵Assistant Professor General Surgery, Lahore General Hospital Lahore. ⁶Assistant Professor, Surgery Unit-II, AMTH

ABSTRACT

A surgical sponge or other relatable substance that remains inside the patient's body after surgery is referred to as a "gossypiboma." One of the rarest but most inexplicable surgical side effects is gossypiboma. Gossypiboma is rare because of the regulatory procedures regarding patient entitlement and the lack of medical information for patients. Complications include abscess formation, bowel obstruction, perforation and sepsis. This case series means to report two instances of gossypiboma in ladies who went through routine obstetrical procedures.

Keywords: Gossypiboma, textiloma, surgical complication, case report.

How to cite this article: Usman M, Sarwar N, Kaleem S, Hamid T, Ali A, Rehamn KU. Surgery Case Reports: Advances And Techniques Erroneous Surgeries: Two Case Reports Of Gossypiboma In Pakistan. Pak Postgrad Med J 2025;36(3): 145-148

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Correspondence to: Dr. Muhammad Usman
House Officer, Surgical Unit II, AMTH

Email: drmuhammadusman233@gmail.com

Received: April 17, 2025; Revised: September 16, 2025
Accepted: September 27, 2025

DOI: <https://doi.org/10.51642/ppmj.v36i03.775>

INTRODUCTION

The accidental retention of surgical foreign bodies, particularly surgical sponges, poses a significant threat to patient safety. Gossypiboma or textiloma, a term coined to describe retained surgical sponges or gauzes after surgery, is a rare and seemingly under-reported event regarding errors occurring in the operating room. An accurate account of incidence is unknown owing to medico-legal concerns, lack of patient medical literacy and even physicians' awareness of such a complication. In Pakistan particularly, there is scarcity of such reports in the literature. ¹ Patients are delayed from an appropriate diagnosis in time, with the median duration

being 2.2 years. Gossypiboma is suspected as a differential diagnosis in only 39% cases. ²

We report two cases of women presenting with vague symptoms after their routine gynecologic-obstetric procedures, which revealed to be gossypiboma.

CASE 1

A 49-year-old female presented with a 2-month history of abdominal pain, high-grade fever (102.4°F) accompanied with rigors following total abdominal hysterectomy. Her symptoms commenced with gradual onset abdominal pain, characterized by non-radiating, intermittent, and stabbing episodes that alleviated solely by medication. Pain was associated with intermittent high-grade fever with rigors and chills. The patient's past medical history was significant for chronic hepatitis C infection, which was diagnosed 6 months previously. Her surgical history included total abdominal hysterectomy 2 months earlier, performed due to extensive uterine fibroids. No history of vomiting, diarrhea, constipation, melena or abdominal trauma was observed. Her personal and family history was insignificant.

Upon presentation, the patient was vitally stable and fully oriented. The physical examination revealed tenderness in the umbilical and suprapubic areas, with no palpable mass. Laboratory investigations revealed reduced haemoglobin (9.3 g/dL), elevated monocytes ($12.1 \times 10^9/L$), and neutrophils (80% of total white blood cell count). Liver function tests were pending due to chronic hepatitis C. Subsequent imaging studies, including ultrasound (USG) and computed tomography (CT) pelvis, demonstrated a tubo-ovarian mass with chronic suppurative salpingo-oophoritis and liver parenchymal changes. Patient was immediately planned to have an emergency exploratory laparotomy to clear the mass.

Figure.1

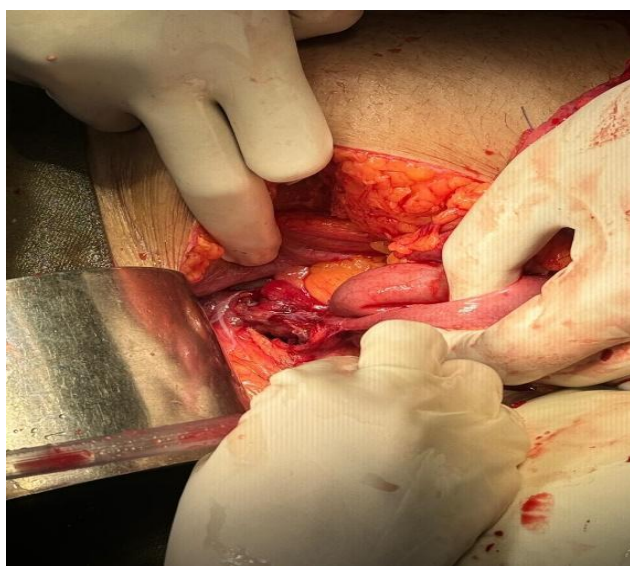
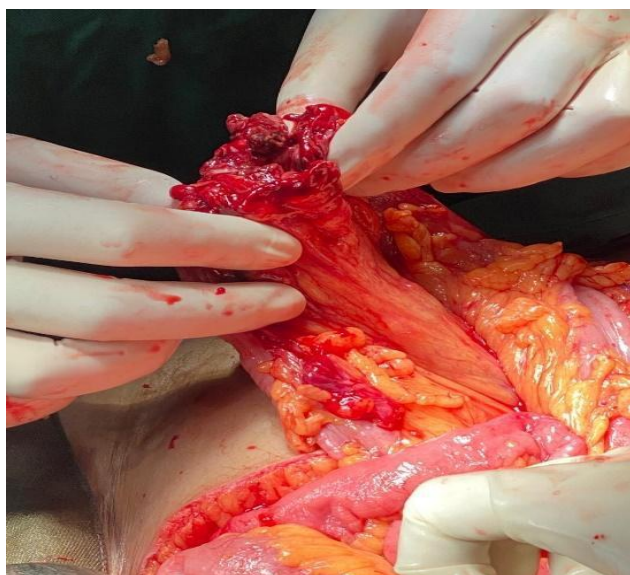


Figure.2



Intraoperative exploration during laparotomy revealed a retained surgical sponge adherent to the transverse colon (as in Figure.1), resulting in a 5x3cm perforation at the antimesenteric border (seen in Figure.2). Ileal adhesions to the mass necessitated double-barrel loop ileostomy creation, performed following family consent. Two drains were placed. Post-operatively, the patient exhibited marked improvement. She was discharged on postoperative day 7 and scheduled for follow-up appointments at 2 weeks for wound check and ileostomy management, 6 weeks for ileostomy reversal, and 3 months for chronic hepatitis C evaluation. After the second week, the patient came for follow-up and reported significant reduction in abdominal pain and fever. Ileostomy management and wound healing were uneventful. Loop ileostomy reversal was performed at 6 weeks without complications, and chronic hepatitis C management continued as per protocol.

CASE 2

A 20-year old female presented to the emergency department with a one-month history of abdominal pain and fever following a caesarean section. The patient denied any comorbidities. The patient reported gradual onset, non-radiating, progressive abdominal pain of severe intensity, accompanied by fever. Physical examination revealed vital stability, full orientation, and a lean physique. Abdominal examination revealed a soft abdomen with tenderness on palpation and adequate bowel sounds on auscultation.

Laboratory investigations revealed haemoglobin of 10.2 g/dL, elevated white blood cell count ($15.1 \times 10^9/L$), and neutrophils comprising 80% of the total white blood cell count. Blood cultures were negative, and liver function tests were within normal limits. Imaging studies, including ultrasound and computed tomography of the abdomen, suggested retroperitoneal hematoma. However, intraoperative findings during surgery to evacuate the hematoma revealed retained surgical sponges left after caesarean section along with gut perforation and necrosis (Figures 3,4). Consequently, an exploratory laparotomy with double-barrel loop ileostomy was performed after obtaining family consent.

Patient improved tremendously after the surgery and was discharged on postoperative day 10. Follow-up appointments were scheduled for wound check and ileostomy management at two weeks, ileostomy reversal at six weeks, and evaluation of surgical outcomes at three months. All the follow-ups were uneventful.

Histopathological examination of both patient samples confirmed chronic suppurative inflammation and foreign body reaction

Figure.3



Figure.4



DISCUSSION

Gossypiboma is a term used to describe a textile material more specifically surgical sponge or gauze unintentionally left within a cavity after surgery. It is both physically and financially taxing for the patients, causing disruption of trust between doctor-patient relationships.²

Described as a never event, retained surgical sponges are still a frequent cause for malpractice lawsuits in the United States.⁴ Owing to legal concerns, it is seldom reported in the literature. Additionally, patients often present with non-specific symptoms, leading to failure of early diagnosis. A study done by Gawande and colleagues approximated the incidence of gossypiboma to be about 1 in 8801 to 18760 procedures. Most incidents dominantly occurred in the abdominal cavity (56%), followed by the pelvis (18%), and thorax (11%). Both of these cases had retained sponges after abdominopelvic procedures.^{2,3,4}

There are several risks pertaining to accidental retention of foreign bodies in surgery. These include emergency surgeries, especially obstetric procedures, and inability to accurately count surgical sponges. Factors like untrained operating staff, lack of coordination in the surgical team, lengthy and arduous surgeries, surgeries of high-risk individuals, and increased BMI of the patient contribute substantially to hazards of retained surgical sponges.^{2,5} Depending upon the body's response to the foreign body, a variety of clinical manifestations can present. Some cases are asymptomatic, while others can present at varying lengths of time with vague abdominal pain, fever, presence of a mass, and even constipation with abdominal distension. Complicated patients can present with fistula, abscess formation, bowel perforation, and peritonitis. The patients mentioned above had presenting symptoms of abdominal pain and fever, and one had a vague palpable mass. Both cases were discovered in <3 months duration.^{2,5,6}

Imaging studies provide a coherent and quick approach towards diagnosis of such cases. Ultrasound and CT imaging are effective when provided with correct clinical context. Features such as striped calcifications, spongiform or honeycomb morphology, area with echogenicity and acoustic shadow can hint to a foreign body presence. MRI may be indicated in case of persistent symptoms or complex cases.^{4,5,6,7}

Surgical management is best preferred for retrieval of gossypiboma. Different modalities can be used depending upon extent and location of tissue involvement. These two patients had to be explored via open laparotomy due to extensive gut adhesions, perforation and necrosis. Laparoscopic and endoscopic approaches have also been used.^{5,8}

To decrease the incidence of gossypiboma, training efforts should focus on adherence to strict all surgical counting policies. The best method is counting all items used inside the operating room before, during and after the surgical procedure with a complete survey of surgical space. Radiography can be implemented if there is further doubt after wound closure. A few recent studies propose the use of textiles with radio-opaque threads for the instant detection of left behind gauzes during the operation and closure of the wounds.^{5, 6, 8}

CONCLUSION

Patients are subject to considerable emotional, monetary, and physical trauma because of a rare and serious complication such as gossypiboma, and it is the result of an inaccurate surgical operation. It is extremely vital that such cases are dealt with in a timely manner as it has profound effects on the outcome of the

patient. Cases of such clinical implications should be well known to surgeons and protocol measures should be followed to avoid such cases in the future.

Consent for publication: Patients have been informed about the publication of their case details and images in a scientific journal for educational purposes.

Consent to participate: Written informed consent was obtained from the patients.

ETHICAL APPROVAL

Ethical approval of case studies was granted by the Institutional Ethical Committee of Rashid Latif Medical College vide reference No 2025/01 dated 23 January 2025

CONFLICT OF INTEREST

Authors declare no conflict of interest.

FUNDING SOURCE: None

AUTHOR'S CONTRIBUTIONS

MU: Ideology and writing

NS: Conceived and designed analysis

SK: Data collection

TH: Data analysis

AA: Biostatistics

KR: Data Interpretation

All Authors: Approval of the final version of the manuscript to be published

4. Alsuhaime, M. A., Alghamdi, H. S., Alshaiji, S. A., Fayi, M. A., & Aldhafeeri, S. M., Retained surgical item (Gossypiboma): a case report and literature review. *Ann. med. surg.*, 85(7), (2023) 3717–3721. Varlas VN, Bors RG, Mastalier B, Balescu I, Bacalbasa N, Cirstoiu M-M. Gossypiboma, the Hidden Enemy of an Emergency Cesarean Hysterectomy—Case Report and Review of the Literature. *J. Clin. Med.* 12(16), (2023) 53
5. Chopra, S., Suri, V., Sikka, P., & Aggarwal, N. (2015). A Case Series on Gossypiboma - Varied Clinical Presentations and Their Management. *J Clin Diagn Res* 9(12), (2015) QR01–QR3.
6. Bai YF, Niu JQ, Zhang C, Wang W, Liu JZ. Computed Tomography and Magnetic Resonance Imaging Appearances of Abdomen and Pelvis Gossypibomas at the Varied Durations After Cesarean Section. *Cureus*. 13(10):e18588., (2021)
7. Ryan G, Kawka M, Gnananandan J, Yip V. Presentation and surgical management of a gossypiboma presenting with small bowel obstruction. *Clin J Gastroenterol.* 14(4), (2021) 1067-1070. doi: 10.1007/s12328-021-01400-y.

MUHAMMAD USMAN¹, NAEEM SARWAR²,
 SHAHZEENA KALEEM³, TAYYABA HAMID⁴,
 ASGHAR ALI⁵, KHALIL-UR-REHMAN⁶

REFERENCES

1. Rehman, A., Baloch, N., Awais, M., Gossypiboma: An unrecognized and under-reported problem in Pakistan. *J Coll Physicians Surg Pak*, 24(12), (2014) 956-956.
2. Wan, W., Le, T., Riskin, L., & Macario, A., Improving safety in the operating room: a systematic literature review of retained surgical sponges. *Curr Opin Anaesthesiol*, 22, (2009) pp. 207–214.
3. Yıldırım, S., Tarım, A., Nursal, T., Yildirim, T., Çalışkan, K., Torer, N., Karagülle, E., et al. Retained surgical sponge (gossypiboma) after intraabdominal or retroperitoneal surgery: 14 cases treated at a single center. *Langenbecks Arch. Surg.* 391, (2006) pp. 390-395.