

## Gossypiboma presenting as a non-healing post-operative wound: an atypical presentation of a rare surgical complication

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### Introduction

A 30-year-old lady presented to the outpatient department with complaints of a non-healing lower abdominal caesarean wound for the past 2 months. She had no history of comorbidities, and, underwent a lower segmental caesarean section for her third pregnancy 4 months back in a private hospital with an indication of breech presentation. After the caesarean surgery, she had an uneventful postoperative course and was discharged. She was asymptomatic for 2 months following the surgery when she noticed a serosanguinous discharge from the caesarean scar. The amount of discharge increased gradually and it became seropurulent with an associated foul smell. There was no history of any fever, vomiting, jaundice, per rectal or per vaginal discharge.

As she was not symptomatically improving and discharge was persisting, she consulted our outpatient department. She was admitted and evaluated for the above complaints. Her physical examination was unremarkable and abdominal examination revealed a nonhealing lower abdominal surgical wound with active pus discharge from two sites. Mild erythema and tenderness were surrounding the wound [Fig.1].



**Figure 1.** Showing non-healing lower abdominal surgical wound with 2 points of active pus discharge.

Her routine laboratory investigations revealed a normal picture. She was further evaluated for the causes of the nonhealing nature of the surgical wound. MRI study revealed a collection at post-operative scar site with linear tract reaching up to a lower abdominopelvic collection of 9x8x6 cm with a suspicious communication of adjacent sigmoid colon loop. Possibility of gossypiboma with fistulous communication with bowel was suggested given the previous history of caesarean surgery. The patient was taken for an explorative laparotomy and on opening the abdominal cavity intertwined small bowel loops forming a mass was noted. The sigmoid colon was found adherent below the scar. Bowel adhesions were released and a surgical mop was found transmigrating into the ileal lumen. The faecal stained surgical mop of 15x15 cm was removed from the ileal lumen [Fig.2] along with the adhered and unhealthy ileal segment.

Sigmoid colon adhesions were released and the ends of the ileum after segmental resection were taken out as double barrel ileostomy. The patient had an uneventful postoperative course and was discharged on postoperative day 5 with a functioning stoma and a healthy wound.



**Figure 2.** Showing removal of surgical mop that has transmigrated to ileal lumen.

### Discussion

Gossypiboma, also known as textiloma, is the inadvertent textile material left behind after surgeries thereby, causing foreign body reaction. It is estimated that foreign bodies are inadvertently left behind in 0.001%-0.01% of post-operative cases, 80% of which are surgical mops, making gossypiboma the most common cause of iatrogenic foreign body [1].

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Though it is estimated to happen in every 1/1500-1/1000 surgeries [2], its true incidence is unknown owing to the under-reporting of cases probably because of medico-legal implications and the embarrassment for the surgical team associated with these cases.

A wide variety of presentations of gossypiboma are reported in the literature. They can be asymptomatic or with symptoms like abdominal pain, abdominal lump, vomiting, diarrhoea, bleeding per rectum or haematuria [3]. Very rarely, an atypical presentation like a non-healing postoperative wound can also be the presenting complaint as in our case. There is only a single similar case reported in the literature so far [4]. A postoperative non-healing wound with an active discharge can have a variety of causes like infection, vascular insufficiency, immunocompromised state as in diabetes, smoking, obesity etc. and this atypical presentation demand a high index of suspicion to be maintained while evaluating postoperative patients. Two pathological mechanisms are suggested for gossypiboma formation [3]. The first one is a transudative mechanism, where a mild inflammatory process ensues fibrin production causing encapsulation and adhesions resulting in mass formation. The second mechanism is an exudative process, characterised by internal or external fistula formation or abscesses. Transmural migration of gossypiboma into bowel lumen is also reported in rare circumstances.

Gossypibomas are most commonly reported after an open cholecystectomy followed by caesarean section [2]. The factors associated with an increased incidence of gossypiboma are emergency surgery, unplanned changes during surgery, severe blood loss, changes in medical and surgical staff during the procedure, failure to count instruments and mops at the end and high body mass index [5]. The treatment of gossypiboma is the surgical removal of the material where it may necessitate an explorative laparotomy via the previous incision. Gossypiboma is a preventable event and can have catastrophic outcomes to both patient and surgical team and hence efforts should be done in all possible means to prevent its occurrence. These include multiple levels of counting of all surgical mops and instruments, adherence to checklists and best surgical practices and encouraging use of radio-opaque mops for all surgeries. To add to the already existing complexity, it has been observed that 88% of gossypiboma happened despite a reported correct counting

[1]. To tackle this problem, some centres have advised strategies like routine usage of an intraoperative radiograph just before closure [5]. It is also important that and there should be legal provisions in the health systems like 'the principle of the duty of candour' in the United Kingdom which mandates a transparent and open discussion with the patients regarding such incidents. This should also be professionally conveyed to the original team so that they can take preventive measures to avoid such incidents in future. These type of incidents carries medico-legal significance and hence thorough documentation, discussion with patients regarding the whole scenario and utmost professionalism are needed while handling such cases.

### Conclusion

Gossypiboma is a rare surgical complication with a myriad of presentations. Very rarely gossypiboma can present with a nonhealing postoperative wound as the sole symptom. The importance of this finding is including gossypiboma also as one of the differentials while evaluating for such wounds.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

### References

1. Singhal PM, Vats M, Neogi S, Agarwal M. Asymptomatic gossypiboma with complete intramural migration and ileoileal fistula. *BMJ Case Rep.* 2019;12[6]. <https://doi.org/10.1136/bcr-2018-228587>
2. Zhang H, Jiang Y, Wang Q, Liu J. Lower abdominal gossypiboma mimics ovarian teratoma: a case report and review of the literature. *World J Surg Oncol.* 2017;15[1]:6. <https://doi.org/10.1186/s12957-016-1082-3>
3. Silva SME, Sousa JB de. [Gossypiboma after abdominal surgery is a challenging clinical problem and a serious medicolegal issue]. *Arq Bras Cir Dig ABCD Braz Arch Dig Surg.* 2013;26[2]:140-3. <https://doi.org/10.1590/S0102-67202013000200015>
4. Mansoor A, Shaukat R, Saeed H, Chaudhary AN, Saeed H. Migratory Gossypiboma: An Unusual Presentation Of A Rare Surgical Complication. *J Ayub Med Coll Abbottabad JAMC.* 2018;30[4]:617-9.
5. Gawande AA, Studdert DM, Orav EJ, Brennan TA, Zinner MJ. Risk Factors for Retained Instruments and Sponges after Surgery. *N Engl J Med.* 2003;348[3]:229-35. <https://doi.org/10.1056/NEJMsa021721>

### Learning Points:

- Gossypiboma is a rare surgical complication with a myriad of presentations, including a non-healing postoperative wound.
- Surgical removal of the gossypiboma via the previous incision is the mainstay of management.
- Multiple levels of counting, adherence to checklists, radio-opaque mops etc. can be used as preventive strategies.