

# Gossypiboma ! Never again: A case report

Shankar Bastakoti<sup>1\*</sup>, Nirmal Lamichhane<sup>2</sup>, Binuma Shrestha<sup>3</sup>

<sup>1</sup>Department of Pathology, <sup>2</sup>Department of Oncosurgery, <sup>3</sup>Department of Oncosurgery, BP Koirala Memorial Cancer Hospital (BPKMCH), Bharatpur, Nepal



This work is licensed under a Creative Commons Attribution 4.0 Unported License.

## ABSTRACT

Gossypiboma refers to a retained sponge in the surgical bed. We present a 40-year-old female from Terai region of Nepal presented with long standing abdominal discomfort which on further radiological examination complex adnexal mass was suspected. She had a history of emergency laparotomy for post-partum hemorrhage more than a decade ago. She underwent surgery for suspicious complex adnexal mass. On exploring fiber formed partly degenerated content was revealed, which on histopathology reveal foamy macrophages, degenerated material and fiber strands and finally diagnosis of Gossypiboma was made. Prevention of gossypiboma is much better than cure.

## KEYWORDS

Gossypiboma, post-surgery, surgical sponge

## BACKGROUND

To err is human!<sup>1</sup>

Complications in surgery are unfortunately not uncommon, some occurred due to human error. The term gossypiboma (also known as textiloma, cottonballoma) is derived from the Latin word "gossypium", which means cotton, and the Swahili word "boma", which means place of concealment, thus referring to a retained sponge in the surgical bed.<sup>2</sup>

Gossypibomas are frequently diagnosed in the intra-abdominal cavity especially pelvic region,<sup>3</sup> presumably due to depth of the pelvic region. However, they can also be found in the chest, extremities, CNS and breast.<sup>4</sup>

Open surgery is the most common approach in the treatment of gossypiboma. Laparoscopic removal of a retained surgical sponge also has been reported.<sup>5</sup> Here we present a case of retained surgical object managed more than decade of occurrence.

## CASE REPORT

A 40-year-old female from Terai region of Nepal presented with long standing dull dragging abdominal discomfort which on further radiological examination complex adnexal mass was suspected. Retrospectively, she had a history of Cesarean Section 14 years back, at that time postpartum hemorrhage occurred and emergency exploration was done and hemostasis was achieved. Since then she had abdominal complaints, abscess formation for which drainage and antibiotics was given multiple times. She never achieved good health. Clinical examination stated her

vitals were stable and per abdominal examination reveal 2-x2-cm firm mass appreciated at lower abdomen, which was relatively fixed in pelvis. Per speculum examination was normal. Her CT scan exhibited a 20x18cm mass in lower abdomen, with solid and cystic components, with thick septa and fluid in the cavities. The wall was enhancing on contrast, suggesting possibility of malignant ovarian mass. CA-125 was also 625 U/ml which also added on the suspicion. After such chronic debility, she underwent surgery for suspicious complex adnexal mass. On exploring fiber formed partly degenerated content was revealed (fig. 1) which was 21x16x6cm in size, which on histopathology reveal foamy macrophages, degenerated material and fiber strands and finally diagnosis of Gossypiboma was made. The patient had an uneventful post-operative course and was discharged well.

## DISCUSSION

Seldom if ever cases of retained sponge reported from both developed and developing countries, diagnosed immediately in post-operative period to as long as 40 years after surgery.<sup>6</sup>

The retained foreign body is a rare occurrence in surgery and was first described by Wilson et al in 1884.<sup>7</sup>

Recently new attempts of usage of electronic article surveillance and electronic tagging of all surgical swabs

\*Corresponding Author | Dr Shankar Bastakoti | BP Koirala Memorial Cancer Hospital (BPKMCH), Bharatpur, Nepal  
Email: drshankarbastakoti@gmail.com, Mobile: 9856087639

are introduced and radiofrequency identification system to trace all surgical instruments and objects but is not performed in resources limited nations like ours.<sup>8</sup>

In mishap of retained sponge, two types of response are usually noted. The first type is an exudative inflammatory reaction with the formation of an abscess and usually leads to early detection and surgical removal. The second type is aseptic with a fibrotic reaction to the cotton material and development of a mass.<sup>8</sup> It may undergo unrecognized, with few cases as incidental findings.

The incidence of gossypiboma is difficult to estimate because of diagnostic difficulties associated with it and underreporting due to unwanted criticism both from media and medico-legal authorities.

There are time and again reported instances of retained sponges in the literature. Many of these describe sponges retained within the abdominal or thoracic cavity. This may result in a local tissue reaction that can best be described as a foreign body granuloma and can be confused with neoplasm.

Earlier, in Nepal, Gossypiboma in Post cholecystectomy patient was reported in 2008,<sup>9</sup> laparotomy for ectopic pregnancy in 2018,<sup>10</sup> intravesical gossypiboma in a 71-year-old man in 2011.<sup>11</sup>

Although human errors cannot be completely abolished. Always an effort to minimize error must be applied, as risk of retained swab is highest in emergency cases, or more than one surgical team involved and patient with high BMI.<sup>12</sup> Despite this, there are scenarios where no count of surgical instruments used, or if done miscounted or the count is falsely correct.<sup>2</sup>

Retained surgical objects lead to complications including adhesions, perforation of the visceral organs, bleeding, sepsis, and even death.<sup>12,13</sup>

Beside numerous diagnostic and therapeutic difficulties, gossypiboma leads to medico-legal implications. The presence of a foreign body inside the patient can be verified straightforward and the patient may litigate the medical team involved. Rarely, it may mimic a tumour and lead to unwarranted invasive diagnostic procedures or extensive extirpative surgery, which may further exacerbate the patients' health.<sup>4</sup>



Fig 1: Cotton made partly degenerated gauze piece.

### CONCLUSION

Prevention of gossypiboma is much better than cure. Post-operative status with pyrexia of unknown origin (PUO) and surgical site discomfort/pain, differential diagnosis of retained foreign object should be kept in consideration. If diagnosed early, morbidity can be reduced by timely intervention.

### REFERENCES

1. Kohn, L. T., Corrigan, J., & Donaldson, M. S. (2000). *To err is human: Building a safer health system*. Washington, D.C.: National Academy Press.
2. Kiernan F, Joyce M, Byrnes CK, O'Grady H, Keane FB, Neary P. Gossypiboma: a case report and review of the literature. *Ir J Med Sci*. 2008 Dec; 177(4):389-91. doi: 10.1007/s11845-008-0197-0. Epub 2008 Sep 27. PMID: 18820991.
3. Bani-Hani KE, Gharaibeh KA, Yaghan RJ. Retained surgical sponges (gossypiboma). *Asian J Surg*. 2005 Apr; 28(2):109-15. doi: 10.1016/s1015-9584(09)60273-6. PMID: 15851364.
4. Pole G, Thomas B. A Pictorial Review of the Many Faces of Gossypiboma – Observations in 6 Cases *Pol J Radiol*. 2017; 82: 418–421. doi: 10.12659/PJR.900745
5. Chin, E.H., Hazzan, D., Herron, D.M. et al. Laparoscopic retrieval of intraabdominal foreign bodies. *Surg Endosc* 21, 1457 (2007). <https://doi.org/10.1007/s00464-006-9011-0>
6. Kato K, Suzuki K and Sai J et al. A case of paravesical foreign body presenting as bladder tumour. *Urol Int* 2000; 65 (4): 224-25
7. Sankpal J, Tayade M, Rathore J, Parikh A, Gadekar D, Fathima S, Sankpal S,
8. Oh, My Gauze!!!- A rare case report of laparoscopic removal of an incidentally discovered gossypiboma during laparoscopic cholecystectomy, *International Journal of Surgery Case Reports*, Volume 72, 2020, Pages 643-6, <https://doi.org/10.1016/j.ijscr.2020.04.058>
9. Gibbs VC, Coakley FD, Reines HD (2007) Preventable errors in the operating room. *Curr Probl Surg* 44(5):281. doi:10.1067/j.cpsurg.2007.03.002
10. Kansakar R, Thapa P, Adhikari S. Intraluminal migration of Gossypiboma without intestinal obstruction for fourteen years. *J Nepal Med Assoc*. 2008 Jul-Sep; 47(171):136-8. PMID: 19079379.
11. Pant P R, Ghimire A, Subedi Nilam, Pant S R. Gossypiboma can remain asymptomatic for a long time, *Grande Medical Journal (GMJ)*, Vol. 1 ,No. 1, Jan. 2019:63-65
12. Kansakar, R., Hamal, B.K. Cystoscopic removal of an intravesical gossypiboma mimicking a bladder mass: a case report. *J Med Case Reports* 5, 579 (2011). <https://doi.org/10.1186/1752-1947-5-579>
13. 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):229–3.