

# Retained Foreign Body (Gossypiboma) Following Abdominal Hysterectomy; Removed Per Vaginum-- 2 Case Reports

Kalyani singh<sup>\*1</sup>, Komal Gupta, Saksham Kr Singh<sup>\*</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Lord Buddha Koshi Medical College and Hospital, India.

**\*Corresponding Author:** Kalyani singh, 1Department of Obstetrics and Gynecology, Lord Buddha Koshi Medical College and Hospital.

**Received date:** May 19, 2021; **Accepted date:** May 29, 2021; **Published date:** June 02, 2021

**Citation:** Kalyani singh, Komal Gupta, Saksham Kr Singh. (2021) Retained Foreign Body (Gossypiboma) Following Abdominal Hysterectomy; Removed Per Vaginum-- 2 Case Reports. *Clinical Research and Clinical Trials*. 3(5); DOI: [10.31579/2693-4779/046](https://doi.org/10.31579/2693-4779/046)

**Copyright:** © 2021 Kalyani singh. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

## Abstract

Total abdominal hysterectomy is a quite common open surgical operation accounting for 54% of all benign diseases. Indications are uterine fibroids, adenomyosis/endometriosis, AUB, chronic pelvic pain, cancer of ovaries, uterus or cervix or cancer phobia. It is relatively an uncomplicated operation and easiest when least required.

**Keywords:** gossypiboma; adenomyosis;endometriosis

## Introduction

Abdominal hysterectomy is the second most common operation among women, first being the cesarean section. Approximately 6,00,000 hysterectomies are performed annually in the United States of America. In India as a whole, 6% of women aged 30-49 years, had undergone a hysterectomy [1].

Every surgery has its own operative and post-operative risk, so the hysterectomy has. Risk increases if patient is obese, there is restricted mobility of uterus, moderate to severe adhesions or improper anesthesia. Intra-operative bleeding along with obesity and inadequate relaxation of abdominal muscles are the worst combination. In haste, a piece of gauze piece or surgical pads or sometimes any surgical foreign material may be left in the abdominal cavity and lost between the layers of intestine or in para colic gutters and may be forgotten. 'Gossypiboma' is the term used for the piece of cotton material left in the abdominal cavity after any surgical operation. 'Gossypium' is the Latin word means 'cotton', and 'Boma' is Swahili means 'a place of concealment' [2]. Gossypiboma was 1<sup>st</sup> described by Wilson in 1984 [3].

Once left, they are mostly taken out by surgery, laparoscopy or lapotomy, to save the patient.

It is an uncommon complication. In fact, data are underestimated because of lack of reports considering its serious medico legal implications [4].

Here, we are presenting 2 cases of gauze pieces/ surgical towels (tetra), left in abdominal cavity following total abdominal hysterectomy (TAH) which were removed per vaginum within 3 months of original operation. TAH has an advantage over other abdominal operations. Here pouch of douglas is opened during surgery which is most dependent and weakest part of the abdomen. Excessive pus like discharge takes place if something (Gossypiboma) is left in pouch of Douglas. A speculum examination may lead to early diagnosis and removal of the material per vaginum. If a lady complains of excessive vaginal discharge following TAH, persisting even after 6 weeks, a strong suspicion and investigation

for Gossypiboma should be made. At this stage removal is considerably easy.

## Case Report

### Case 1

A 35 years old women had TAH in June 2019. Her recovery was uncomplicated and was discharged on 8<sup>th</sup> day. One month later, she reported with some pain, feverish feel and pus like discharge per vaginum. Abdominal stitches were healthy. A course of antibiotic was given and she was advised to maintain hygiene. She reported again after 15days with some supra pubic lump and vaginal discharge. A speculum examination was made. A gauze like material was visible partly at vault suture line. It was held with a sponge holder and pulled gently. It was thought to be a forgotten gauze piece but a 4x4 inch, multi layered, gauze towel came out. Nothing was disclosed to Patient and attendant, 3 days IV antibiotics were given and patient recovered well. She has no complains since then.

### Case2

TAH was done on 38 years old, multi gravida for big fibroid on 13<sup>th</sup> Sept 2020. On 7<sup>th</sup> Oct she reported with continuous spotting. Patient was assured that it's a minor post-op complication. On 23<sup>rd</sup> Nov, she complained of white discharge for 2 months. Antibiotics were given. She came again on 30<sup>th</sup> Dec with similar complain and a speculum examination was made which showed gauze like material peeping at vault suture line. It was pulled gently with sponge holder and it was a small gauze piece. On 25<sup>th</sup>Jan 2021, her vault had completely healed up with no discharge.

## Discussion

Gossypiboma is an uncommon and iatrogenic, dread ful condition due to its medical and medico legal complications. Its prevalence is difficult to judge due to under reporting of cases. It has been reported to occur in 100 to 5000 of all surgical operations and 1 in 1000-1500 for intra-abdominal

operations [5]. It is ironically said that if you have never left a gauze piece in abdominal cavity, you haven't done sufficient number of surgeries.

It may mimic tumor, cyst, adhesions, infection or malignancy.

Different types of materials are used by the surgeon as an adjunct to surgery like suture materials, prosthesis, implants, surgical mesh etc. They could be absorbable/ inert material and well tolerated, like surgical sutures, implants or mesh etc. Gauze are made of cotton fibers, non-absorbable materials and may produce foreign body reactions producing symptoms.

Two types of responses in the body are seen with Gossypibomas-exudative and aseptic fibrosis. Exudative Gossypiboma, however, usually occur early in post-operative period and may have secondary bacterial contamination which can result in fever, pain, nausea & vomiting, lump formation or various fistulas.

Aseptic fibrosis may remain asymptomatic for long time, may have adhesions, encapsulations, and may present as pain, lump, obstruction etc. If left for considerable time in the abdomen, the sponge can be surrounded by omentum and bowel, which attempt to encapsulate it. In an endeavor to expel the foreign body, bowel may engulf the sponge without any apparent opening in the intestinal wall. If such material can't completely pass through the ileo-caecal valve, it may cause intestinal obstruction at this level. If it passes through this valve, it may be easily discharged through the anus [6]. A high degree of suspicion for Gossypiboma is needed if patient has prior history of some operation at the site of complications. Routine diagnostic modalities for finding a Gossypiboma are, ultra sonography, X-Ray, CT scan and MRI and lastly surgical exploration.

Diagnosis in our cases were quite simple. On per speculum examination, we were able to see the gauze peeping through the vault suture line. This was because body tries to expel out any foreign material by the easiest and nearest route. Here the vaginal vault, as it is opened up during hysterectomy and is the most dependent portion of the abdominal cavity. Usually pouch of Douglas is packed during TAH to keep intestines away.

Ultra sonography is the most widely used preliminary test to diagnose any intra-abdominal pathology. The typical ultrasound features of Gossypiboma has been divided in three types(i) an echogenic area with strong acoustic shadow due to retained gauze,(ii) a well-defined cystic mass containing distinct internal hyper-echoic, wavy, striped structures; and (iii) quite nonspecific patterns with a hyper echoic mass or complex mass [7].

X ray radiography could be diagnostic if a radio-opaque material is incorporated with the retained swab or surgical gauze. But it could be difficult in radiolucent swabs or long standing cases as surgical markers may become twisted or folded and may present an unusual picture making the diagnosis difficult.

Chrematistic features of CT scan include spongiform appearance with gas bubbles, low density mass with a thin enhancing capsule and calcification deposited along with the network architecture of a surgical sponge. Now a days, CT is the main modality for diagnosis (61%), followed by radiography (35%), and USG (34%) [8].

On MRI, Gossypiboma in the abdomen and pelvis appear as a well-defined mass that show a peripheral wall of low signal intensity on T1 and T enhanced MRI in T2W imaging. Contrast enhanced MRI is more informative. In that T1W images shows serrated contour on the inner border of peripheral wall and whorled stripes are seen in the central portion as low signal at T2W imaging.

In a study series of 14 cases of Gossypibomas by Alper Sozutek et al, 10(71.4%) cases were done by general surgeons while 4 (28.6%) were operated by gynaecologist [9].

Aruna Nigam reported a case of gossypiboma following laproscopic hysterectomy. Patient complained of continued vaginal discharge and speculum examination revealed a small pus discharging sinus at the vaginal vault. First it was treated conservatively .CT scan revealed a 3.5 cm rounded wall lesion in relation to recto sigmoid junction with peripheral enhancement and air loculi within. Sinus was dilated and a gauze piece taken out with artery forceps 1 year after the original operation. Patient recovered [10].

In a case control study of 54 cases and 235 matched control, Gibbs Et al mentioned 8 risk factors emergency operation, unexpected change in operation, more than 1 surgical team involved, change in nursing staff during procedure, high body mass index, increased volume of blood loss, female sex, and surgical counts stated by He considered 3 risk factors to be statically significant- emergency surgery, unplanned change in the operation and increased body mass index [11]. In the above list, we would like to add one more risk factors-improper anesthesia and relaxation ,restricted mobility of the uterus and dense adhesions. Overconfidence also leads to mistakes. In my 1st case report, surgeon took out the uterus, left the abdominal closure for assistant and went for another surgery. Gyne operations are mostly done under spinal anesthesia and if relaxation is not adequate, protrusion of bowel in operative field may displace some gauze piece or packing material in between layers of bowel loops.

Florian Oehme reported a sucked surgical sponge causing bowel obstruction following vaginal hysterectomy. Emergency laparotomy was done 22 months after original surgery and bowel loop resection saved the lady [12].

Nitin N Shah et al reported a case of gossypiboma following vaginal hysterectomy [13].Lady presented with H/o occasional fever following vaginal hysterectomy 4 months back. She had purulent vaginal discharge. A gauze piece was taken out laparoscopically.

Gossypiboma is a preventable condition. Surgeon and team needs to be alert while using any packing material. Still mishap takes place. So many preventable steps has been advised. Swab count at the beginning of operation and before closure of abdomen must be done. Swabs should be used abdominally when they are 'mounted on a stick' means by holding with some long instrument like sponge holder, artery or Ellis forceps. Sponges should be tagged with a radio-opaque marker. Newer techniques for tracing include electronic article surveillance system which uses tagged surgical sponge that can be detected electronically [14]. To effectively use surgical instruments, Kant Medical Centre NTTEC in Tokyo introduced automatic identification and data capture (AIDC) technologies in the theatre sterile supply unit. Bar codes applied to all sponges are detectable with bar code scanners [15].But these are expensive methods, simple tagging of gauze towel with long tails may prevent much complications.

## Conclusion

Gossypiboma is an iatrogenic, serious medical error with its medical and medico legal complication which may lead to patient's morbidity and mortality too. TAH has an advantage over other abdominal surgery that vaginal vault is opened here which is the weakest and most dependent portion of the abdominal cavity. Initially a Gossypiboma gives a warning signal in form of excessive vaginal discharge which may be associated with fever, lump, blood stained discharge and /or other constitutional symptoms. A simple speculum examination may diagnose the case and gentle traction of the gauze may cure the patient.

If diagnosed late, Gossypiboma may migrate to other site in an endeavor to be expelled by other routes, requiring laparotomy or laparoscopy.

## References

1. Chander Shekhar, Balram Paswan & Abhisekh Singh; Prevalence, socio demographic determinants and self-reported reasons for hysterectomy in India, Reproductive health Article 16.
2. Gossypiboma.
3. Adonis Manzella et al; (2009) Imaging of Gossypiboms: pictorial review: Americal Journal of Rhoentgenology, Vol193, 6, p94-101.
4. Umunna Ji; Gossypiboma and its implications: J west African college of Surgeons, Volume 2,No4,P95-104
5. Murat Yavla & Banu Dane; (2006) A foreign body in pregnancy: Gynecological surgery, 3,130-131.
6. Choi JW, Lee CH et al; (2006) Transmural migration of surgical sponge evacuated by defecation: mimicking intra peritoneal Gossypiboma. Korean J Radiol; 212-214.
7. Ian Bickle and Dr Boyanov V.
8. Shigeo Sugano et al; Gossypiboma: (1993) Diagnosis with Ultrasonography; J Clin Ultrasound 21:289292.
9. Alper sozutek,Tahsin Colak and Edip Akpinar; Intra-abdominal gossypiboma revisited
10. Aruna Nigam, Archana kumara.Gossypiboma: (2014) a rare cause of chronic vaginal discharge after laproscopic hysterectomy.BMJ Case Reaport.
11. Gibbs VC, Coakley FD; (2011) preventable errors in operating room: retained foreign body in surgery.Current prob surgery; 44:261-337.
12. Florain Oehme, Annika Ruhle; The sucked surgical sponge: (2019) rare case of Gossypiboma after vaginal hysterectomy. Clinical case report.
13. Shah NH et al; Gossypiboma: a surgical menace. (2019) Int J of Reproduction, Contraception, Obstetrics and Gynaecology.8(11):4630-4632
14. Fabian CE, (2005) Electronic tagging of surgical sponges to prevent their accidental retention. Surgery; 137(3):298-301.
15. Ochiai Chikayuki, RFID and bar code based management of surgical instruments in theatre sterile supply unit.



This work is licensed under Creative Commons Attribution 4.0 License

To Submit Your Article Click Here: [Submit Manuscript](#)

DOI: [10.31579/2642-9756/046](https://doi.org/10.31579/2642-9756/046)

### Ready to submit your research? Choose Auctores and benefit from:

- ❖ fast, convenient online submission
- ❖ rigorous peer review by experienced research in your field
- ❖ rapid publication on acceptance
- ❖ authors retain copyrights
- ❖ unique DOI for all articles
- ❖ immediate, unrestricted online access

At Auctores, research is always in progress.

Learn more [www.auctoresonline.org/journals/clinical-research-and-clinical-trials-](http://www.auctoresonline.org/journals/clinical-research-and-clinical-trials-)