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## Retained Post-Operative Foreign Body of Gynaecologic Origin at Ascending Colon

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### Abstract

Post-operative retention of surgical sponges occurs in 1 in 5,500 cases. Migration from the abdomen to the intestines occurs infrequently. The incidence is unknown due to poor reporting. A 38 year old nullipara presented with a four month history of increasingly painful abdominal swelling following myomectomy. She had a history of low grade fever, nausea and constipation. On examination, she was afebrile, in mild/moderate distress and chronically ill-looking. Abdominal examination showed an 8 cm × 6 cm firm, mobile and tender, right sided para-umbilical mass with a discharging sinus along the lower 1/3 of the midline sub umbilical surgical wound. Ultrasound suggested an abdominal-pelvic abscess. Exploratory laparotomy revealed severe fibrinoid adhesions involving the fundus of the uterus, sigmoid colon, ascending colon and anterior abdominal wall. Dissection revealed that two pieces of sanitary pads in the ascending colon formed the right sided para-umbilical mass palpated on abdominal examination. There were bowel perforations involving the illeocecal complex and ascending colon. The ovaries and fallopian tubes were not visualized. The sanitary pads were removed; right hemicolectomy, ileocolic anastomosis and copious abdominal lavage were performed. By two weeks after surgery she developed an enterocutaneous fistula (ECF) that healed spontaneously within two weeks. Meticulous surgical techniques including surgical sponge and instrument counts and intracavity sponge tagging should be observed while working in body cavities.

**Keywords:** Gossypiboma; Surgical gauze; Medico-legal; Colonic tumor

### Introduction

Retention of surgical sponges following surgery though rare does occur. Many of these cases are unreported due to

medico-legal implications [1,2]. In most instances, the foreign body is left in the abdomen of the patient for a period of few months to as much as 20 years [2]. A few researchers have reported retained surgical gauze in other body cavities such as; the thoracic cavity, pericardial space and paraspinal muscles [2]. Gossypiboma is the term used when referring to a piece of cotton material forgotten in a body cavity after surgical operation. The word "gossypium" in Latin means cotton, and "boma" is Swahili which means a "place of concealment". Other historical terminologies used to describe gossypiboma are "textiloma", "gauzeoma", "cottoniod", and "cottonbaloma" [2,3]. The granulomatous reaction around the foreign body can produce exudates with formation of abscess or a fibrotic mass [1,2,4]. The patient may initially be asymptomatic, but will become symptomatic after few days to 28 years [5,6]. In most cases diagnosis could be ascertained through imaging techniques such as MRI, CT scan, radiography and ultrasound [3,5]. We report a case of retained sanitary pads in the abdomen of a patient following open myomectomy at a peripheral health facility.

### Case Presentation

Four months after an open myomectomy, a 38 year old nullipara developed increasingly painful abdominal swelling. She initially presented to a secondary health care facility where the post-surgical draining sinus and colicky abdominal pain were observed for two weeks, after which she was transferred to the tertiary health care facility. She had history of low grade fever, loss of appetite, constipation and weight loss, but no vomiting or diarrhoea. She did not have vaginal discharge or bleeding. There were no significant respiratory or urinary symptoms. She was in a monogamous relationship. She was a known HIV patient on highly active antiretroviral drugs (HAART) but was not diabetic or hypertensive.

On examination, she was mildly/moderately distressed, chronically ill-looking, and afebrile (Temperature-36.5°C). She was well dehydrated without pedal edema. Her cardiovascular and respiratory examinations were normal. Abdominal examination showed a right sided Para-umbilical mass

approximately 8 cm × 6 cm, firm, mobile and tender, with a discharging sinus along the lower 1/3 of the surgical wound. There was no palpable organomegaly. Bowel sounds were active. Pelvic examination showed a vulva smeared with copious whitish foul smelling discharge. Speculum examination revealed a healthy looking cervix with thick whitish discharge in the posterior fornix. Bimanual examination was difficult due to tenderness on the lower abdomen. There was right adnexal tenderness; none on the left and the pouch of Douglas was free. Gloved finger was stained with discharge. Digital rectal examination did not reveal anything significant. The working differential diagnoses were postsurgical abdomino pelvic abscess and colonic tumor. Ultrasound showed a normal sized homogeneous, empty uterus with a significant free fluid collection in the POD. There was a right sided abdomino pelvic mixed echogenic mass. The urinary bladder, kidneys, ureters, liver, spleen, gall bladder, pancreas and stomach were all normal. The peri-portal, peri-pancreatic and peri-aortic lymph nodes were not enlarged. The renal system was normal. Pre-operative hematological and biochemical evaluation were normal.

Exploratory laparotomy revealed severe fibrinoid adhesions involving the fundus of the uterus, sigmoid colon, ascending colon and anterior abdominal wall. Two sanitary pads formed a mass in the ascending colon (**Figure 1**).



**Figure 1** Gossypiboma removed from the abdominal cavity of patient at surgery

There were bowel perforations involving the ileocecal complex and ascending colon. The ovaries and Fallopian tubes were not visualized. Estimated blood loss was 750 mls. The pads were removed. Right hemicolectomy, ileocolic anastomosis and copious abdominal lavage were performed by the general surgeon who was invited during the surgery. Perioperative antibiotic treatment was with intravenous ceftriazone 1 g 12 hourly for 72 hours, intravenous metronidazole 500 mg 8 hourly for 72 hours and intravenous 5% dextrose-saline 1 liter 8 hourly for 24 hours were administered. She had 2 units of blood transfused in order to optimized wound healing been an immunosuppressed patient. Two weeks after surgery she developed an enterocutaneous

fistula (ECF) which eventually healed spontaneously within 2 weeks.

## Discussion

The incidence of gossypiboma is not accurately known due to poor reporting. It is however reported to vary from 0.01% to 0.03% [7]. Cotton pads, towels and sponges are usually used to control bleeding and occasionally for packing the paracolic gutters during gynaecologic surgeries. Strangely, sanitary pads instead of surgical cotton pads were used in the patient. Health workers practicing in rural health care facilities in a low resource setting like ours could do unconventional practices. However, despite precautions to ensure that surgical instruments are removed from body cavities after surgery, mistakes occur leading to gossypiboma. Clinically, abdominal gossypiboma can present with pain, distension, vomiting, diarrhoea, intestinal obstruction, fistula formation or pseudotumour [8,9]. In the case presented above the patient's symptoms were colicky abdominal, nausea and constipation. Some authors have reported cases in which there was transmural migration of surgical sponges without an obvious incision on the bowels [3,10]. It is reported that wattanasirichaqoon from his experiments on rats explained the fate of a foreign gauze in the abdomen to include reaction, sepsis, mass and remodelling [11]. Intra-abdominal abscess and colonic tumor were the entertained diagnoses due to the low index of suspicion usually associated with retained surgical gauze. Some authors have reported long discovery time of gossypiboma. Taylor et al. reported foreign body discovery 43 years after thoracotomy [4]. In neurosurgery procedure of laminectomy a forgotten foreign body was discovered 40 years later. Sumer et al. reported foreign body extraction 23 years after caesarean section [4]. Research has shown that patient with gossypiboma are most likely to have had emergency surgeries, sudden change in surgical procedure, torrential blood loss, high BMI, long operating time, incorrect sponge count etc. [4,10]. Despite the invasion of the ascending colon without a visible breach in the wall of the bowel prior to our surgical intervention significant obstructive gastrointestinal symptoms had not occurred. This could be due to partial invasion and may be the fact that the large bowel unlike the small bowel was capable of accommodating the squeezed cotton material. Obstructive symptoms could have been more obvious if the small bowel was involved [3,12,13]. This made the impression of an abdominal abscess the most likely consideration. Hojjat et al. reported a similar experience in Iran [3]. Radiological diagnosis of gossypiboma could be difficult pre-operatively especially if the foreign body is not radio opaque. Although majority of the sponges are not radio-opaque, recent researchers are focusing on the use of radio-opaque and or QP coded surgical sponges [8,12,14]. In the reported case, ultrasound was utilized. The ultrasonographic appearance of sanitary pads however mimicked abscess cavity. If they are readily available, CT or MRI can be used. Treatment is necessary to preclude further morbidity and potential mortality. A high index of suspicion for gossypiboma should be entertained by surgeons caring for postoperative patients. Sponges should be tagged during surgery to avoid leaving

them behind after operation. The tradition of strict swab count and record system should be sustained.

## Conclusion

Meticulous surgical technique including sponge and instrument counts aimed at preventing post-operative retention of foreign materials in body cavities should be observed routinely. Junior and lower cadre of health personnel working in peripheral health facilities should undertake continuing medical training in order to reduce the incidence to a barest minimum. A high index of suspicion for retained foreign body after surgery should be entertained in patient with significant gastrointestinal symptoms and a past history of surgery.

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