ABSTRACT

Gossypiboma, an infrequent surgical complication, is a mass lesion due to a retained surgical sponge surrounded by foreign body reaction. In this case report, we describe gossypiboma in the abdominal cavity which was detected 3 yrs after the first surgery and presented as lower abdominal pain. CT scan revealed a soft tissue mass of heterogeneous density containing solid and cystic components with areas of necrosis in the pelvis, most likely of ovarian origin. Exploratory laparatomy revealed a well localized thick walled pelvic mass with few adhesions around, separated easily and removed in Toto. The patient was discharged without complication. This case was presented to point to retained foreign body (RFB) complications and we believed that the possibility of a retained foreign body should be considered in the differential diagnosis of who had previous surgery and complained of pain, infection, or palpable mass.

KEY WORDS: Surgical Spence, Complication, Abdomen

CASE REPORT

GOSSYPIBOMA, A RARE CAUSE OF PELVIC MASS: A CASE REPORT AND REVIEW OF LITERATURE

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INTRODUCTION

A retained foreign body (RFBs) is a term used for a surgical complication resulting from foreign materials accidentally left in a patient's body1,2. The term “gossypiboma” (Gossypium: Latin, cotton; Boma: Swahili, a place of concealment) refers to a mass composed of cotton matrix retained within the human body3. Other reported foreign bodies that may be forgotten in the abdomen include abdominal towels, artery forceps, pieces of broken instruments or irrigating sets and rubber tubes4. RFBs are rarely reported in the literature because symptoms are usually non-specific and some patient remains asymptomatic and are never discovered or documented5. Data concerning the incidence of gossypiboma tend to fluctuate and the incidence of gossypiboma is difficult to estimate because of a low reporting rate lest medico-legal implication6. The reported incidence of retained surgical sponge is one per 1,000–15,000 abdominal operations7. We report a case with retained gauze causing lower abdominal pain off and on following abdominal hysterectomy 3 yrs earlier.

CASE PRESENTATION

A 41-year-old multiparous lady presented with lower abdominal pain off and on for 3 months. There were no gynecological or other abdominal symptoms. There was history of abdominal hysterectomy 3 yrs ago. All vital signs were normal. A per-abdomen examination revealed a vague mass in the lower abdomen. All routine investigations were within normal limits. Radiology was inconclusive. CT scan revealed a soft tissue mass of heterogeneous density containing solid and cystic components with areas of necrosis in the pelvis, most likely of ovarian origin. Exploratory laparatomy was performed which revealed a well localized thick walled pelvic mass with few adhesions around, separated easily and removed in Toto. The specimen was sent as a whole for histopathology. Grossly specimen consists of a cyst measuring 12 cms in diameter. On opening, it was unilocular and was filled with brown colored fluid and cotton gauze. On serial sectioning of surrounding fatty tissue four lymph nodes were found measuring 0.5cms to 1 cms in diameter. Microscopy sections revealed fragments of cyst wall composed of loose fibrous tissue lined by an infiltrate of histiocystes, foreign body giant cells some material and inflammatory cells. No evidence of malignancy was seen. The lymph nodes showed dilated sinus filled with macrophages and few foreign body granulomas. Postoperative course was uneventful.

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FIGURE - 1 : EXPLORATORY LAPARATOMY REVEALED A WELL ENCAPSULATED CYSTIC PELVIC MASS
The reported incidence of retained surgical sponge is one per 1,000–15,000 abdominal operations\(^7,8\). Incidence of gossypiboma is low in developed countries due to the advanced operation room conditions and radiological techniques. A surgical sponge can be retained after any surgery but most commonly after hysterectomy, appendectomy, and cholecystectomy\(^2\). Persistent wound infection, unexplained pain, and fever in the postoperative period should lead one to suspect a retained foreign body. This condition is often underestimated, because usually such cases are not reported due to the fear of social and medicolegal repercussions\(^8\). Patients are often asymptomatic and may not be detected even for a long time. In fact, many cases were discovered to have a retained surgical sponge more than 30 years after the initial surgery\(^1\). In the case report which was conducted by Sumer et al\., gossypiboma was extracted from the abdominal cavity 23 years after caesarean operation\(^8,10\). Some of patients present with abdominal mass or sub acute intestinal obstruction. They may rarely result in fistula, perforation, or even extrusion per anus. In our case, the patient had also a gynecological operation 3 yrs ago and she had intermittent abdominal pain only.

According to recent review article by Wan et al\., about retained sponges, gossypibomas were most commonly found in the abdomen (56%), pelvis (18%), and thorax (11%)\(^3,8,10\). The main signs and symptoms are pain/irritation (42%), palpable mass (27%), and fever (12%)\(^3,8,10,11\). The retained surgical sponge triggers two biological responses named as aseptic fibrous responses due to foreign body granuloma or exudative reaction leading to abscess formation\(^12\). The most common detection methods were computed tomography (61%), plain radiography (35%), and ultrasound (34%)\(^3,8\). So, the first diagnostic modality to rule it out should be a computed tomography scan. MRI features can be confusing because the radio-opaque marker is not magnetic or paramagnetic\(^13\). Intense acoustic collection in operation area or the mass can be shown by USG. If sponge contains radio-opaque marker, it can be seen in direct X-ray. The universal guideline which was stated by the American College of Surgeons in October 2005 strictly recommended that radio-opaque sponges should only be used, and accurate sponge counts should be performed before the procedure, and before and after closure of the abdomen.

Migration of retained sponge into bowel is rare but does occur when compared to abscess formation and occur as a result of inflammation of the intestinal wall that evolves to necrosis\(^13\). In our case, a large surgical sponge caused a foreign body reaction leading to mass formation 3 yrs after surgery.

Operation under emergency conditions, involvement of more than the one surgical team in the operation, change in assistant staff during operation, increased BMI, volume loss, number of surgeons, and female gender are all risk factors for RFB\(^7,8\). Irrespective of the rarity of reports, operating teams should take care to count swabs used in all procedures. Surgeons should develop a habit of performing a brief but thorough routine postoperative wound and cavity exploration prior to wound closure\(^8\). Treatment of gossypiboma is the surgical removal usually through the previous operative site, but endoscopic or laparoscopic approaches may be attempted\(^14\).

Prevention of gossypiboma can be done by following the operation room protocol strictly. It should include tagging the packs with markers and thorough counting of the gauzes and sponges opened and used in a specific operation. Newer technologies are being developed like radiofrequency chip identification (RFID) by barcode scanner to reduce the incidence of retained foreign bodies after the surgery\(^15\). The overall objective of these accessories is to eliminate errors in the sponge count by removing the human error factor. Furthermore, the sponge count protocol itself should be implanted to minimize the hazards to patient safety\(^15\).

**CONCLUSION**

Present case is an important pearl that one must be aware of the risk factors that could lead to a gossypiboma and take measures to prevent it. Gossypibomas are uncommon, mostly asymptomatic, usually not in the differential diagnosis and hard to diagnose. Particularly, chronic cases do not show specific clinical and radiological signs for differential diagnosis. It should be included in the differential diagnosis of soft-tissue masses detected in patients with a history of a prior operation and unexplained abdominal pain.
REFERENCES


