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(CASE REPORT)

A gossypiboma in the bladder; Case report

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Abstract

Case summary: A mass that forms around a retained surgical textile, usually a sponge, and causes a foreign-body reaction is known as gossypiboma (also known as textiloma or retained surgical sponge). It is an avoidable iatrogenic condition that has consequences for patient safety and medical legal issues for practitioner and hospital and medical fraternity at large.

We present a case of 30 years old female with gossypiboma, following surgery which was done about 2 years ago, to address the complaints of lower urinary tract symptoms. She visited multiple facility where urethral catheter was inserted to relieve her symptoms and later was seen at out facility where diagnosis of gossypiboma was made during urethro-cystoscopy, which was later removed.

Acute or delayed presentation is possible, and it varies greatly. Infection, abscess, fistula, intestinal blockage, perforation, discomfort, palpable mass, and non-specific constitutional symptoms are all possible in patients. Some people don't have any symptoms for months or even years.

Keywords: Gossypiboma; Retained surgical sponge; Textiloma; LUTS: Lower urinary tract symptoms

1. Introduction

A mass of cotton material, typically gauze, sponges, and towels, that is unintentionally left in the body cavity following surgery is referred to as a "gossypiboma." The name "gossypiboma" comes from two sources: the Swahili word "boma," which means "place of concealment," and the Latin word "gossypium," which means textile or cotton (1),(2) Textile materials are the most frequently forgotten surgical supplies, while other surgical supplies such artery forceps, fragments of damaged instruments or irrigation sets, scissors, needles, and rubber materials may also be lost in the body. Factors leading to leaving foreign body post-surgery include emergencies, with unplanned changes in procedure, and with higher body-mass index(3). Typically, it results in an exudative inflammatory response that forms an abscess or aseptic fibrosis that grows into a mass that creates more issues (4). Exact incidence of gossypiboma is unknown due to underreporting of cases, with the incidence estimated at around 0.01-0.03%(5).

2. Case presentation

The main complaint of a 30-year-old female patient who came to our urology department was that, she had been using a urethral catheter to drain urine, prior claim to have LUTS that included irritative and obstructive symptoms for two

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years before experiencing acute urine retention where urethral catheter was inserted. She had a cesarean section 2 years prior to the commencement of these symptoms. Vital signs during examination were Respiratory rate: 22/min, Pulse Rate: 112/min, and Blood Pressure: 110/80 mmHg. A moderate dilated bladder was found during the suprapubic examination as she had kept spigot her urethral catheter. The lower abdomen had a Pfannenstiel incision scar.

Her White Blood Cell count (87% neutrophil) was 17,400 and other parameters were normal. A Kidney-ureter-bladder (KUB) ultrasound scan revealed bilateral mild hydronephrosis and a tumor like surrounding the bladder with posterior acoustic shadow. A thin, thick, radio-opaque marking is clearly visible on a KUB X-ray. With a bladder stone diagnosis and a suspicion of gossypiboma, she was scheduled for cystoscope +/- exploration or cystolithotomy. Cystoscope was done as it is shown on diagram below **image 2**, followed by decision to open the patient where a transverse incision and careful dissection, the bladder was located, a vertical incision was made, the two surgical sponge that had been retained was removed, and the diagnosis of gossypiboma was verified. Vicryl 2-0 suture was used to seal the bladder in two layers. After the procedure, she was discharged on the second day in satisfactory condition with a urethral catheter. At 21 days post operative, urethral catheter was removed and patient was able to void well, with KUB ultrasound scan showing insignificant residual urine volume. She is on follow up for the hydronephrosis, and renal function tests are all within normal range.

Figure 1 Bladder ultrasonographic scan revealing a hyperechoic lesion

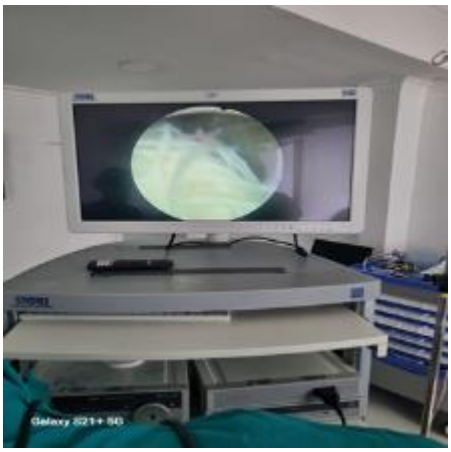

Figure 2 Cystoscopy revealing a retained gauze in the urinary bladder

Figure 3 Bladder exposure during surgery revealing a retained gauze

Figure 4 A gauze that has been removed from the bladder

3. Discussion

This is a case of a patient diagnosed with foreign body in the bladder, cystoscopy finding revealed a surgical gauze that was left inside the bladder causing the patient to present with lower urinary tract symptoms. Gossypiboma is a real,

serious but preventable surgical complication. It affects the patient safety, cost of treatment and may cause mortality if there is delay in diagnosis and treatment (6). The incidence of retained surgical to be items such as surgical mop, needle, or any part of instrument following surgery is not exactly known but projected to be 0.01 %–0.001 %(6) due to reasons mentioned prior. Gossypiboma is major chunk out of all these foreign bodies that is 80 % of cases (7).

Gossypiboma frequently occurs in situations involving emergency surgeries, lengthy and challenging operations, unanticipated alterations in surgical procedures, lack of organization within the surgical team, inadequate communication, or shifts in the surgical team or scrub nurse (4)(3).

The clinical presentation of Gossypiboma varies widely, with patient's potentially showing symptoms anywhere from just a few days to over 40 years after the initial surgery. The abdomen is the most commonly affected area (56%), followed by the pelvis (18%) and thorax (11%) and very rare inside the bladder. Typical symptoms and signs include pain, a palpable mass, abdominal distension, tenesmus, and vomiting. Gossypiboma can lead to complications such as intestinal obstruction, abscesses, fistula formation, sepsis, renal insufficient or in some cases, even death (6).

Ultrasonography reveals distinctive patterns such as a bright echogenic region accompanied by strong posterior shadowing, a hyperechoic wavy striped structure, and a hypoechoic or complicated mass.

Surgery is the sole method for treating Gossypiboma. Preventative measures against Gossypiboma are crucial and can be achieved through a comprehensive approach. The American College of Surgeons (ACS) and the Association of Registered Nurses in the USA advice that gauze counts should take place at various stages during surgery. Gauze counts must be conducted before the surgery begins and at the end of procedure. The entire crew must search for the missing item if the count is off, and a thorough examination of the surgical site is necessary (8).

Institutional policies that help to promote surgical safety and prevent complications like gossypiboma can incorporate an efficient surgical safety routine, such as the WHO checklist (6).

4. Conclusions

Gossypiboma is serous but avoidable, postoperative complication. It must be prevented at all costs. It can cause significant morbidity for the patient. It has serious medicolegal implications and negative impact on medical fraternity. The surgeons should comply with the current recommendations on the prevention of retained surgical items. It is the collective responsibility of the surgical team, the nursing team, and operation theatre technicians to ensure the safety of the patient.

Compliance with ethical standards

Disclosure of conflict of interest

The authors report no declarations of interest.

Statement of informed consent

The publication and dissemination of the case was authorized by the patient. Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

- **Dr Mohammed Mbarouk**: Chief surgeon, article writing, review and corresponding author.
- **Dr Eliphius Justin Asila**: Assistant surgeon, article writing review and corresponding author.
- **Dr Zerra Israel Cheyo:** Data curation, Methodology, Article writing-review and editing
- **Dr Samuel Kibona:** Data curation, Methodology, Article writing-review and editing
- **Dr Emanuel Itambu:** Data curation, Methodology, Article writing-review and editing

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