

Case Report

Abdominal Gossypiboma

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ABSTRACT

Gossypiboma or textiloma is a term used to describe the material formed by cotton matrix that is unintentionally left in some cavity during surgery, which may cause secondary reactions or complications related to its presence inside the cavity and contact with adjacent structures. ¹

Two types of reactions to the foreign body have been described, such as the formation of a fibrotic layer around the foreign body, which may or may not represent future complications, and the second may be asymptomatic or have important clinical repercussions such as intestinal obstruction, peritonitis, adhesions, fistulas, abdominal abscesses, gastrointestinal disruptions and perforations ^{1,2}. The incidence of this type of condition is unknown due to its legal and medical implications, but is estimated to be 1 in 100-3000 surgeries ³.

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INTRODUCTION

33-year-old female, who has no history of chronic degenerative diseases, previous surgeries resection of synovial cyst in right hand, surgical history of emergency caesarean section abdominal approach complicated by placental abruption that merited treatment in intensive care 5 years ago.

She refers to start with discomfort since late post-surgery with increased volume in left hemi-abdomen, without association to physical activity or food intake, denying obstructive data, only intermittent constipation, denies weight loss.

On physical examination vital signs within normal parameters without data of systemic inflammatory response, patient with globose abdomen highlighting the presence on

palpation in left hemi abdomen of an indurated, regular, non-painful, non-mobile lesion.

METHODS

A study approach is initiated requesting imaging and laboratory studies leukocytes of 6.1 Hemoglobin 10.8 Platelets 269 alpha-fetoprotein 2.86 Ca 19-9 20.3 Embryonic carcinogenic antigen of 1.73.

Abdominal USG imaging studies were requested and reported round cystic collection, defined margins with heterogeneous echo texture, internal content with echogenic area acoustic shadow, without vascularity with measures of 103x86x96mm and an estimated volume of 454 cc.

Abdominal tomography highlights in left hemiabdomen presence of heterogeneous collection, dense and amorphous and

hypertensive material with thin wall capsule, lesion of 13x13x14 cm internal densities 11 to 68 HU with presence of hyperdense artifact inside, without reinforcement in contrasted phase.

After completing the pre-surgical protocol, it was decided to perform an exploratory laparotomy.

RESULTS

It was decided to perform an exploratory laparotomy with a 20 cm midline incision, finding a 20x25 cm cystic tumor in the left flank adhered to the anterior abdominal wall, releasing the cystic tumor through adhesiolysis and partial omentectomy (Fig. 1, Fig. 2).

The tumor was opened and abundant purulent liquid of approximately 250 cc was obtained with a cotton compress in its interior in which opaque tissue was observed (Fig. 3, Fig. 4). Subsequent review of the abdominal cavity and cleaning of the cavity, without finding associated lesions that required surgical management at the time, closure of the abdominal cavity, terminating the surgical event.

The patient had a favorable postoperative evolution without complications, tolerating adequately the oral route and no systemic inflammatory response. The patient was discharged on the second postoperative day. With adequate outpatient follow-up.

DISCUSSION

Gossypibomas or textilomas are incidental findings, it is a delicate situation due to the medical-legal problem it can generate. Because of this, there is no exact statistical data due to the underreporting of the same. It represents a risk factor for serious complications that have repercussions on the patient's health and

condition. For this reason, patient safety protocols have been created and implemented during surgical procedures to reduce human error.

Any type of material used during the surgical procedure can be forgotten, from gauze, compresses, tweezers, sponges, etc. However, gauze and compresses are the most reported objects associated with this entity¹. The clinical presentation is variable, presenting symptoms during the immediate post-surgical period up to more than 40 years after the surgical procedure. A higher female to male ratio is found due to more obstetric procedures. The most found sites are abdominal cavity 56%, pelvis 18% and thorax 11%. The most common symptomatology is the sensation of abdominal mass and pain, and the main complications are adhesions 31%, abscesses 24% and complicated fistulas in 20%². Due to this, health care costs are increased and the risk of lawsuits and medico-legal situations involving health care personnel and institutions increases.

CONCLUSION

The initial diagnosis in 90% of patients is made by simple abdominal radiography in at least 2 types of projections and the other 10% will require advanced studies such as ultrasound, tomography or even magnetic resonance imaging³. In some cases it is a differential diagnosis due to the similarity with an abdominal tumor in patients who do not present symptoms that require emergency treatment.

Due to the type of material of the textilomas, they are non-absorbable, there is no degeneration of the foreign body which causes two types of response to the object, the first is an aseptic fibrinous reaction that generates adhesions and encapsulation with the formation of foreign body granuloma and the

second is the exudative type in which abscesses are formed with an inflammatory response ^{1,2,3}. The treatment of choice for gossypiboma is open surgery, for the assessment and resolution of complications associated with it ^{3,4}. The culture and implementation of protocols for the prevention of this type of lesions is vital, due to the medical-legal implications ^{3,5}.

CONFLICTS OF INTERESTS

The authors have no conflict of interest.

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REFERENCES

1. Silva-Carmona A, Ganado-Escobar AM, Mondragón-Chimal MA. Textiloma que se presenta como una masa abdominal: presentación de un caso y revisión bibliográfica. *Med Investig* [Internet]. 2014;2(1):18–22. Disponible en: [http://dx.doi.org/10.1016/s2214-3106\(15\)30023-6](http://dx.doi.org/10.1016/s2214-3106(15)30023-6)
2. Alemu BN, Tiruneh AG. Gossypiboma: A case series and literature review. *Ethiop J Health Sci* [Internet]. 2020;30(1):147–9. Disponible en: <http://dx.doi.org/10.4314/ejhs.v30i1.19>
3. Córdova-Pluma VH, Vega-López CA, Castillo-González FA, Cornejo-López GB, Ramírez-Arias JL, Rodríguez-Treviño C. Textiloma abdominal: reporte de caso [Internet]. *Medigraphic.com*. 2012 [citado el 14 de mayo de 2023]. Disponible en: <https://www.medigraphic.com/pdfs/medintmex/mim-2012/mim124q.pdf>
4. Bani-Hani KE, Gharaibeh KA, Yagha RJ. Retained surgical sponges (gossypiboma). *Asian J Surg* [Internet]. 2005;28(2):109–15.

Disponible en: [http://dx.doi.org/10.1016/s1015-9584\(09\)60273-6](http://dx.doi.org/10.1016/s1015-9584(09)60273-6)

5. Rajagopal A, Martin J. Gossypiboma--"a surgeon's legacy": report of a case and review of the literature. *Dis Colon Rectum* [Internet]. 2002;45(1):119–20. Disponible en: <http://dx.doi.org/10.1007/s10350-004-6124-1>

FIGURES



FIG. 1. Cystic tumor

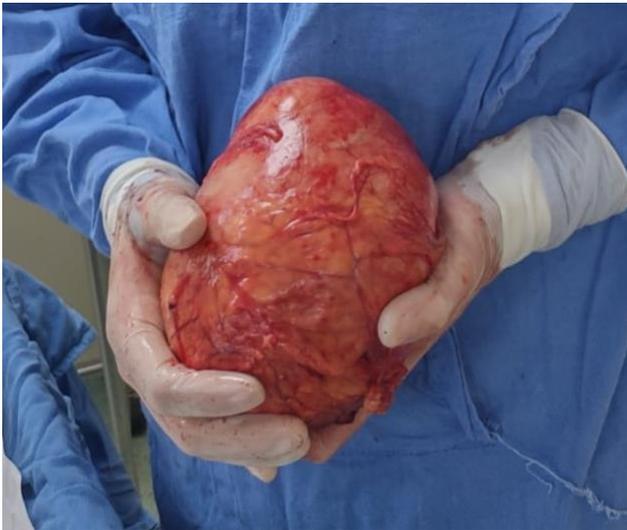


FIG. 2. Surgical piece



FIG 3. Purulent liquid when opening the capsule

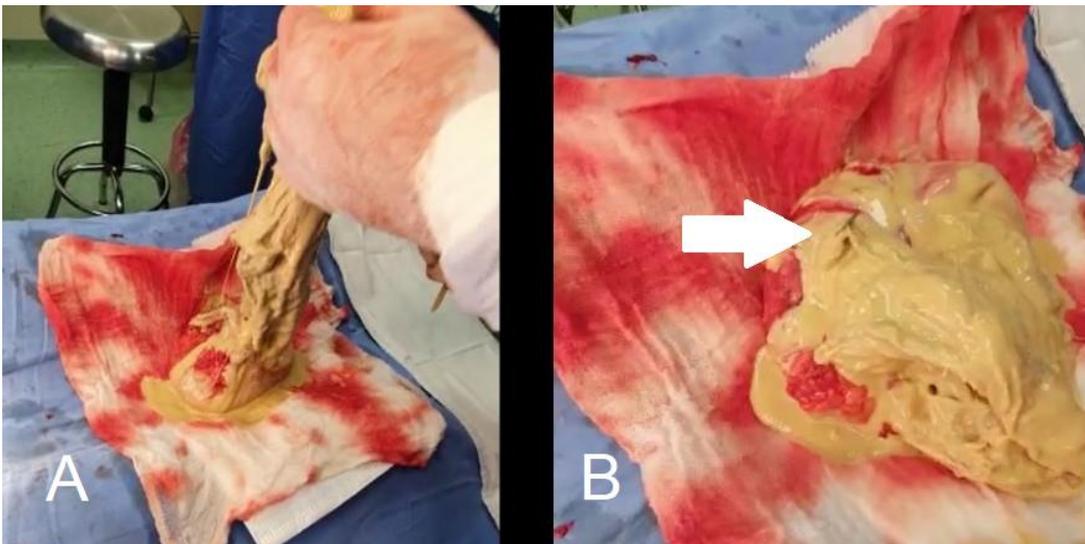


FIG. 4. A) Gauze extracted from capsule B) White arrow opaque weave of compress