Gossypiboma mistaken for a hydatid cyst: case report

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ABSTRACT

Although considered a rare complication, gossypiboma continues to be a clinically important and probably more frequently encountered than reported situation. This study aimed to report a case of gossypiboma that was mistaken for a hydatid cyst in the preoperative evaluation. A 34-year-old male patient with a history of Nissen Fundoplication presented with a large mass palpable in the epigastrium and both the left upper and lower quadrants of the abdomen. Computerized tomography was reported to show a 20x18 cm cystic mass with a collapsed germinative membrane inside it. Laparotomy, which was performed with a suggested diagnosis of type 3 hydatid cyst, revealed that the mass was caused by a 30x30 cm surgical abdominal compression. We believe gossypiboma should be kept in mind in the differential diagnosis of abdominal hydatid cysts in the presence of a former abdominal operation, especially when the result of indirect hemagglutination test is negative.

Keywords: Gossypiboma, retained foreign body, hydatid cyst

INTRODUCTION

Gossypiboma is the term that is used to describe a mass of cotton matrix or surgical sponge accidentally retained in the body after surgery (1). Although considered a rare complication, it continues to be a clinically important and probably more frequently encountered than reported situation (2,3). Due to its nonspecific symptomatology and the fact that it can stay asymptomatic for years, its diagnosis is difficult (4). It may mimic an abdominal or pelvic soft tissue tumor and on abdominal computerized tomography (CT) it may be indistinguishable from an abdominal abscess (5). Thoracic gossypibomas can even be mistaken for echinococcal lesions (6).

This study aimed to present an abdominal case of gossypiboma that was mistaken for a hydatid cyst in the preoperative evaluation.

CASE REPORT

A 34-year-old male patient was admitted to our clinic for complaints of nausea and vomiting after meals and abdominal distention that was apparent for the last 5 months. He had a history of Nissen fundoplication performed with open approach 10 years ago. On physical examination there was a median laparotomy incision from the tip of the xiphoid to the umbilicus. A large mass was palpable in the epigastrium and both the left upper and lower quadrants of the abdomen. Laboratory tests, including indirect hemagglutination test, were in normal range. Abdominal computerized tomography (CT) revealed a 20x18 cm calcified cystic mass with a collapsed germinative membrane inside it. The lesion was in close proximity with the left lobe of the liver, the stomach and the spleen; pushing the stomach to the superior right and the spleen to the superior left (Figure 1). Esophagogastroduodenoscopy showed an unexpanding stomach with a hyperemic mucosa.

Although indirect hemagglutination test was negative, the patient was operated with a suggested diagnosis of type 3 hydatid cyst. Laparotomy revealed a large mass, filling the epigastrium and expanding into both left upper and lower quad-
rants of the abdomen. The pseudocapsule of the mass was impossible to dissect from the adjacent structures. When the pseudocapsule was opened, 3 liters of brown-black, non-smelly liquid discharged. In the cystic cavity there was a 30x30 cm surgical abdominal compress near the esophageal hiatus (Figure 2,3). The compress was extracted, and the cavity was washed with saline. After the insertion of a drain into the cavity, the abdomen was closed.

The patient was discharged from the hospital on the second postoperative day without any problems and he was well in his outpatient control at the end of his fifth postoperative year.

The patient gave informed consent allowing his medical information to be used in medical research and scientific papers.

DISCUSSION

The estimated incidence of gossypibomas is highly variable, reports ranging from one in 100 to one in 19000 cases; and since many cases go unreported due to medico-legal problems, the incidence is quite difficult to predict (3,7,8).

There are two sorts of foreign body reactions caused by retained sponges. The first is an aseptic fibrous reaction resulting in adhesions, encapsulation and granuloma formation. These patients may remain asymptomatic or present with a pseudotumor syndrome. The other sort of reaction involves exudative inflammatory reaction with abscess formation or chronic external or internal fistula formation (7).

Clinical presentation may vary according to the location of the foreign body (7). Symptoms and clinical findings are usually nonspecific and may include nonspecific abdominal pain, nausea, vomiting, and a palpable mass or intestinal obstruction (5). The symptoms may appear early in the postoperative period or the situation may remain asymptomatic for years and some cases may even never be discovered (7). The median time for the cases to be discovered is reported to be 7 years and there are reports of foreign bodies remaining undetected for 40 years (2,9). In our case the patient had stayed asymptomatic for 10 years.

Radiographs are the most commonly used method to detect retained sponges (5). Generally surgical sponges have radiopaque markers that facilitate detection with standard radiography; however, sponges without these markers are still being used in some institutions, decreasing the chance of detection of gossypibomas by direct radiography and even by abdominal CT (10). The absence of such a marker in our case contributed to the confusion in radiologic diagnosis.

On CT the spongiform pattern with gas bubbles is the most characteristic sign for gossypibomas (5). As a result, the differential diagnosis includes hematoma and abscess early in the postoperative period. However, in time, the air trapped in the foreign material is absorbed and in the absence of a radiopaque marker
as in our case, lesions appear with or without whirl-like high density stripes (6). Differentiation from neoplasms or degenerated hydatid cysts may be difficult at this stage (6). Hydatid cysts are highlighted in the differential diagnosis of thoracic gossypibomas (6). However, to our knowledge, there are only six cases of gossypiboma in the literature together with the present case to be mistaken for an abdominal hydatid cyst during the preoperative evaluation (7,11-14). All of these cases have been reported from countries in which echinococcosis is endemic.

Indirect hemagglutination test, which is frequently used in combination with radiologic tests in the diagnosis of hydatid cysts, has a sensitivity varying between 60-100% (15). Therefore, when deciding for a surgical operation with a suggested diagnosis of a hydatid cyst, we rely on the radiologic tests more than the indirect hemagglutination test.

**CONCLUSION**

We believe gossypiboma should be kept in mind in the differential diagnosis of abdominal hydatid cysts in the presence of a former abdominal operation. A negative indirect hemagglutination test may urge the surgeon to suspect the condition even if the abdominal CT suggests an echinococcal lesion. This is especially important in countries with a high incidence of hydatid cysts as these will be the countries in which the lesion is most likely to be mistaken for an echinococcal lesion.

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**Informed Consent:** Written informed consent was obtained from patient who participated in this case.

**Peer Review:** Externally peer-reviewed.

**Author Contributions:** Concept - B.O.B., P.E.E., M.O.; Design - All of authors; Supervision - R.H.G., S.A.; Materials - All of authors; Data Collection and/or Processing - B.O.B., S.A., M.O.; Analysis and/or Interpretation - B.O.B., R.H.G., P.E.E.; Literature Search - All of authors; Writing Manuscript - B.O.B., M.O.; Critical Reviews - R.H.G., P.E.E., S.A.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

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Kist hidatik öntanısıyla ameliyat edilen hastada saptanan gosipiboma: olgu sunumu

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ÖZET

Ender bir komplikasyon olarak kabul edilen gosipiboma, klinik olarak önemli ve muhtemelen de bildirildiğinden daha sık rastlanan bir durumdur. Burada ameliyat öncesi değerlendirmede kist hidatik tanışı alan bir gosipiboma olgusu sunulacaktır. Nissen Fundoplakson öyküsü bulunan 34 yaşında bir erkek hasta, epigastrik bölgede ve sol üst ve sol alt kadranlarda ele gelen kitle ile bölümüne başvurdu. Bilgisayarlı tomografide 20x18 cm boyutlarında, içinde çökmüş germinatif membran bulunan kistik kitle görüldü. Lapa-rotomide kitlenin nedeninin 30x30 cm boyutlarında bir karın kompresi olduğu belirlendi. Önceden geçirilmiş bir karın ameliyatı varlığında gosipibomunun kist hidatik ayırıcı tanısında, özellikle de kist hidatik hemaglutinasyon testi negatif ise akılda bulundurulması gerektiğini düşünüyoruz.

Anahtar Kelimeler: Gosipiboma, unutulmuş yabancı cisim, kist hidatik

DOI: 10.47717/turkjsurg.2020.3742