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A Rare Medicolegal Cause of Acute Abdomen: Gossypiboma Causing Enteroenteric and Enterocutaneous Fistula

Nadir Medikolegal Bir Akut Batın Nedeni: Enteroenterik ve Enterokutanöz Fistüle Neden Olan Gossipiboma

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Abstract

Gossypiboma are surgical tampons that are forgotten in the operation area and cause serious complications in the patient. The most frequently forgotten foreign body in operations are surgical tampons. Early recognition of gossypiboma is important to minimize the risk of morbidity and mortality in the patient. While they may be asymptomatic, they may cause complications such as perforation, obstruction, peritonitis, intra-abdominal or enterocutaneous fistula, abscess and sepsis. In the differential diagnosis, hematoma, pseudocyst and tumors should be considered. In computed tomography (CT), the spongy appearance formed as a result of the air trapped in the cotton pad is characteristic. Its treatment is surgery. If possible, preventive measures such as using radiopaque labeled tampons and careful counting of surgical materials before and after each surgical operation should be taken. It should be kept in mind in the differential diagnosis of gossypiboma in patients with a history of previous surgery and diagnosed with an intra-abdominal mass.

Keywords: Gossypiboma, Previous Surgery, Medicolegal Problems

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Öz

Gossipiboma, operasyonda ameliyat bölgesinde unutulan ve hastada ciddi komplikasyonlara neden olan cerrahi tamponlardır. Operasyonlarda en sık unutulan yabancı cisim cerrahi tamponlardır. Hastada morbidite ve mortalite riskini en aza indirmek için gossipibomanın erken tanınması önemlidir. Asemptomatik olabileceği gibi, perforasyon, obstrüksiyon, peritonit, intraabdominal veya enterokutanöz fistül, abse ve sepsis gibi komplikasyonlara neden olabilirler. Ayırıcı tanıda hematom, psödokist ve tümörler düşünülmelidir. Bilgisayarlı tomografide (BT) pamuklu tampon içinde havanın hapsolması sonucu oluşan süngerimsi görünüm karakteristiktir. Tedavisi cerrahidir. İmkan varsa radyoopak işaretli tampon kullanılması, her cerrahi operasyon öncesi ve sonrasında cerrahi malzemelerin dikkatli sayımı gibi önleyici tedbirler alınması gerekir. Geçirilmiş ameliyat öyküsü olan, akut batın, fistül ve karın içi kitle tanısı alan hastalarda gossipiboma ayırıcı tanıda akılda tutulmalıdır.

Anahtar Kelimeler: Gossipiboma, Geçirilmiş Cerrahi, Medikolegal Problemler

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Introduction

Gossypiboma are surgical tampons that are forgotten in the operation area and cause serious complications in the patient (1). The incidence after abdominal operations is 1/3000-1/5000. However, it is thought to be at a higher rate due to medicolegal problems (2,3). Although it is seen after cardiovascular surgery, orthopedic, gynecological and urological surgeries, it is most commonly seen after general surgery (4). The most frequently forgotten foreign body is surgical tampons (3). While they may be asymptomatic, they may cause serious complications such as perforation, obstruction, peritonitis, intra-abdominal or enterocutaneous fistula, abscess, and sepsis (3,5,6).

Plain roentgenography, ultrasonography (US), computed tomography (CT), and magnetic resonance imaging (MR) are used for diagnosis (2). If the forgotten surgical pad is radiopaque, direct radiography is useful. Spongy appearance on CT is typical for the lesion (7.8). The absence of a radiopaque sign in surgical tampons or the loss of radiopacity over time are factors that complicate the diagnosis and may cause the mass to be misinterpreted as an abscess, tumor or hydatid cyst (3,4,6,7).

Primary treatment is surgery. It can be prevented by taking preventive measures such as the use of radiopaque marked tampons and careful counting of surgical materials at the end of each surgical operation (3,4). Gossypiboma should be kept in mind in the differential diagnosis in order to minimize morbidity and mortality in patients with a history of previous surgery and diagnosed with an intra-abdominal mass.

A patient with gossypiboma who had a history of bilateral aortafemoral bypass surgery three months ago and who applied to the emergency clinic every week after discharge due to abdominal pain, nausea and fever, causing peritoneal irritation findings, small bowel perforation, enteroenteric and enterocutaneous fistula is presented.

It was observed that he had previously applied to the emergency department with complaints such as loss of appetite, nausea, vomiting, and abdominal pain, and in his last application, enterocutaneous fistula developed. The patient, who was consulted to our clinic, reported the entire abdomen CT taken 4 days ago as enterocutaneous fistula and focal segmental aneurysmatic enlargement of the small intestine (stenosis at the outlet?). Gossypiboma was not mentioned in his CT, but it is seen in the images. Since this pathology is rare, it was overlooked by the radiologist (Figure 2).

Case Report

A 52-year-old male patient presented to the emergency department with complaints of abdominal pain, fever, and discharge from the anterior abdominal wall. The physical examination of the patient, who had bilateral aortafemoral bypass surgery by cardiovascular surgery three months ago, revealed subfebrile fever, amputation in both big toes, tenderness in the left abdominal quadrant, rebound, defence, enterocutaneous fistula mouth, and a palpable mass lesion of approximately 8*10 cm.

There were no abnormal findings in laboratory tests except leukocytosis, neutrophilia and elevated CRP. On plain abdominal X-ray, there was a suspicious radiopaque appearance of approximately 8*10 cm in the left quadrant (Figure 1). Contrast-enhanced abdominal CT examination revealed a thin-walled, well-circumscribed hypodense lesion with air densities of 9*12 cm in the left abdominal quadrant (Figure 2).

The patient underwent emergency surgery with a preliminary diagnosis of gossypiboma. During exploration, it was observed that the small intestines gato in the left lower quadrant and fistulized towards the skin and there was an abscess underneath. Two perforations of approximately 1 cm were observed at a distance of approximately 10 and 15 cm from treitz, and they were primarily sutured. At a distance of approximately 50 cm from treitz, a gossypiboma (surgical compress) was removed from the fistulized jejunum causing gato, and this section was resected segmentally and an end-to-and enteroenterostomy was performed (Figure 3,4).

Figure 1. Plain abdominal X-ray

Figure 2. CT

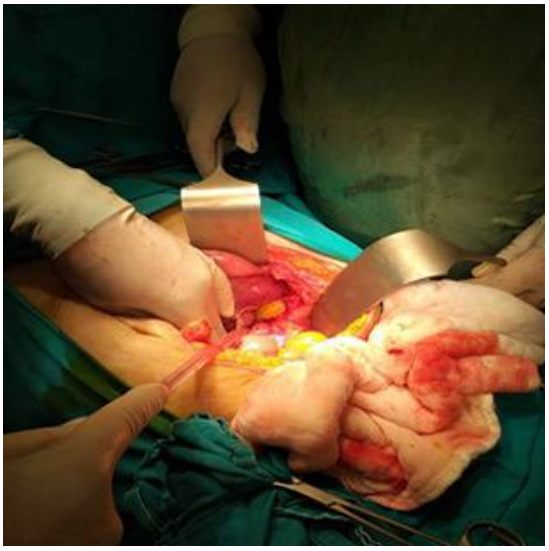

Figure 3. Gossypiboma

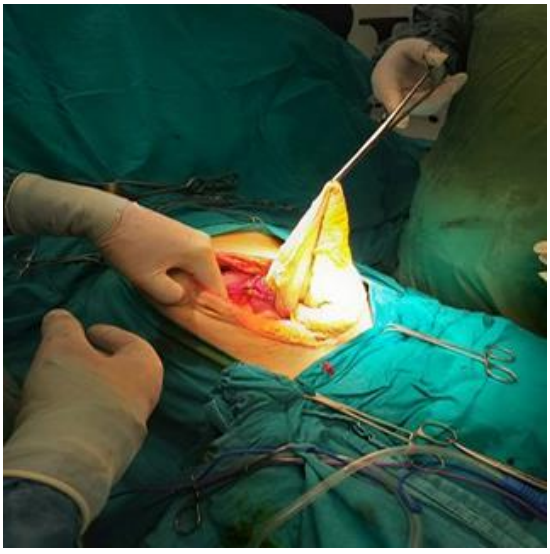

Figure 4. Gossypiboma

Due to anastomosis leakage on the 4th postoperative day, oral nutrition was discontinued and parenteral nutrition was started. The incision line was followed by applying vacuum assisted closing (VAC) for 3 weeks. The patient was discharged because of the absence of drains and incision site. The patient did not need to be operated again. Incisional hernia developed in the patient.

Discussion

Gossypiboma is a term used for surgical tampons that have been forgotten at the operation site. It was first described by Wilson in 1884. Although it has been reported that it occurs at rates ranging from 1/3000 to 1/5000 after intra-abdominal surgery, the actual number is unknown because it has been reported very little due to medicolegal reasons (9). It is most commonly seen after general surgery operations (2,3,4). Obese patients, emergency surgical operations, the participation of a large number of surgical teams in the operation, the prolongation of the operation time, the presence of inexperienced personnel in the surgical

team, and personnel changes during the operation are high risk factors (10). In this case, risk factors such as the long duration of the operation and the change of the nurse team were identified.

The diagnosis of gossypiboma may be detected in the early period, by chance during the investigation of nonspecific complaints that usually occur after surgery, or in the late period due to serious complications such as perforation, abscess, and peritonitis (5,6). Sometimes they are discovered incidentally during radiological examinations performed for different reasons, long after surgery. In this case, the patient had bilateral aortafemoral bypass surgery three months ago and clinical symptoms such as abdominal pain, nausea, loss of appetite, and fever. Diagnosis of gossybipoma in nonspecific or asymptomatic cases can be difficult for the clinician and radiologist. Clinicians and radiologist should keep the diagnosis of gossypoma in mind and be familiar with abdominal CT. In this case, the diagnosis of gossypoma was missed by the radiologist in the contrast-enhanced abdominal CT of the patient.

Gossypiboma cause aseptic fibrinous reaction and exudative reaction in the body. Complications such as foreign body granuloma may occur as a result of aseptic fibrinous reaction, and complications such as abscess, fistulization, bowel obstruction or perforation and granulomatous peritonitis may occur as a result of exudative reaction. Fistula formation may develop between the gastrointestinal tract and sponge (11,12). In this case, peritoneal irritation findings, small bowel perforation, enteroenteric and enterocutaneous fistula were detected as a result of migration of the compress into the jejunum.

Primary treatment is surgery. If possible, it can be prevented by taking preventive measures such as using radiopaque marked tampons, careful counting of surgical materials before and after each surgical operation, warning the surgical team about counting during change, the surgeon's request for packing and compression counting before closing the incision, and checking with direct X-ray if necessary in suspicious cases (3,4).

Conclusion

Gossypiboma should be kept in mind in the differential diagnosis in order to minimize morbidity and mortality in patients with a history of previous surgery and diagnosed with an intra-abdominal mass.

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