Cumhuriyet Tıp Derg 2011; 33: 239-242
Cumhuriyet Med J 2011; 33: 239-242

Case report-Olgu sunumu

Intra-abdominal gossypiboma

Intraabdominal gossipiboma

Firdevs Topal, Sabiye Akbulut, Nazmiye Dinçer, Çağatay Topçu, Şeref Yılmaz, Hikmet Sarıkaya, Özlem Yönem*, Fatih Esat Topal

Gastroenterology Clinic (F. Topal, MD, N. Dinçer, MD, Ç. Topçu, MD, H. Sarıkaya, MD, Ş. Yılmaz), Çankırı State Hospital, TR-18100 Çankırı, Gastroenterology Clinic (S. Akbulut, MD), Kartal Koşuyolu Yüksek İhtisas Hospital, TR-34846 İstanbul, Department of Gastroenterology (Assoc. Prof. Ö. Yönem, MD), Cumhuriyet University School of Medicine, TR-58140 Sivas, Emergency Clinic (F. E. Topal, MD), Çankırı State Hospital, TR-18100 Çankırı

Abstract

A surgical sponge left in abdominal cavity following completion of the operation (Gossypiboma) is a rare entity. Surgical gauze pad will initiate a granulomatous reaction and it may appear as a large intra-abdominal mass. This condition is referred as gossypiboma. They may not only cause aseptic reactions without significant symptom, but they may also lead to exudative reaction which is manifested in the early phase with non-specific symptoms. Computerized Tomography (CT) is a very valuable method in determination of gossypiboma. Here, we aimed to present a case diagnosed as gossypiboma by CT examination in a 35-years old female who had applied to our clinic with complaints of abdominal pain, vomiting and weight loss.

Keywords: Foreign body, gossypiboma, intra-abdominal mass, intestinal fistulae

Özet

Operasyonda unutulmuş cerrahi spançlar (Gossipiboma) nadir görülen bir antitedir. Cerrahi gazlı bez granülamatöz bir reaksiyon başlatarak büyük bir kitle şeklinde görüntü verebilir. Buna gossipiboma denir. Bunlar belirgin semptom vermeyen aseptik reaksiyona neden olabildikleri gibi, erken dönemde nonspesifik semptomlarla kendini gösteren eksudatif reaksiyona da neden olabilirler. Bilgisayarlı Tomografi (BT) gossipibomaların tanınmasında çok değerli bir yöntemdir. Biz 35 yaşında karın ağrısı, kusma, kilo kaybı şikayeti ile başvuran kadın hastada, BT'de gossipiboma tanısı koyduğumuz hastayı sunmayı amaçladık.

Anahtar sözcükler: Yabancı cisim, gossipiboma, intraabdominal kitle, intestinal fistül

Geliş tarihi/Received: September 25, 2010; **Kabul tarihi/Accepted:** January 18, 2011

***Corresponding author:**

Özlem Yönem, MD, Gastroenteroloji Anabilim Dalı, Cumhuriyet Üniversitesi Tıp Fakültesi, TR-58140 Sivas. E-posta: ozlemyonem@gmail.com

Introduction

In surgical procedures, post-operative complications are inevitable and they are often serious. One of those complications is gossypiboma which refers to surgical sponges left in the body following completion of the surgical procedure. Gossypiboma is most commonly observed as foreign materials left in the body after the operation. Although its incidence in abdominal surgeries was reported to be 1 case per 3000-5000 individuals, the real incidence is believed to be higher [1, 2]. Here, we aimed to present a case diagnosed as gossypiboma in a 35-years old female who had referred to our clinic with complaints of abdominal pain, vomiting and weight loss.

Case report

A 35-years old female patient was referred to our gastroenterology outpatient clinic for complaints of abdominal pain, vomiting and weight loss. Her past medical history revealed a caesarian section operation performed 5 months ago. She had abdominal pain which had started immediately after the operation. Her concomitant symptoms were weight loss of 6 kilograms within 5 months, nausea, vomiting and fatigue. The patient had applied to the emergency department for three times due to these same complaints and she had received blood transfusions due to her low hemoglobin level and had been discharged to home after then. Her vital signs were stable. She had cachectic appearance, her scleras were pale and she had abdominal tenderness. Laboratory examination revealed: white blood cell count (WBC): 7770/mm^3, hemoglobin: 7.10g/dL and platelet count: 593,000/mm^3. Routine biochemistry panel was normal. HbsAg (Hepatitis B virus surface antigen), anti HCV (Hepatitis C virus antibody) and anti HIV (Human immunodeficiency virus antibody) were all negative. Tumor markers were negative. Her abdominal ultrasonography was also normal. Endoscopic examination showed antral gastritis. In colonoscopic examination, regions beyond left colon were not examined. Abdominal CT revealed a regularly organized intra-abdominal mass with dimensions of 8x10 cm including air bubbles that were localized to mid-section of the mass (gossypiboma) (Figure 1.a). Following consultation with surgery, her intra-abdominal mass was surgically removed (Figure 1.b). At the 3rd post-operative day, intestinal fistula with high flow rate developed in the patient. As the flow rate of the fistula did not decrease, she was re-operated at the 7th post-operative day. During this last operation, an intestinal perforation, which was missed in the first operation, was detected. Perforated intestinal section was resected and an end-ileostomy was performed. Four months after end-ileostomy, ileostomy revision was performed. The patient gained weight and her symptoms of abdominal pain, nausea and vomiting resolved after these operations.

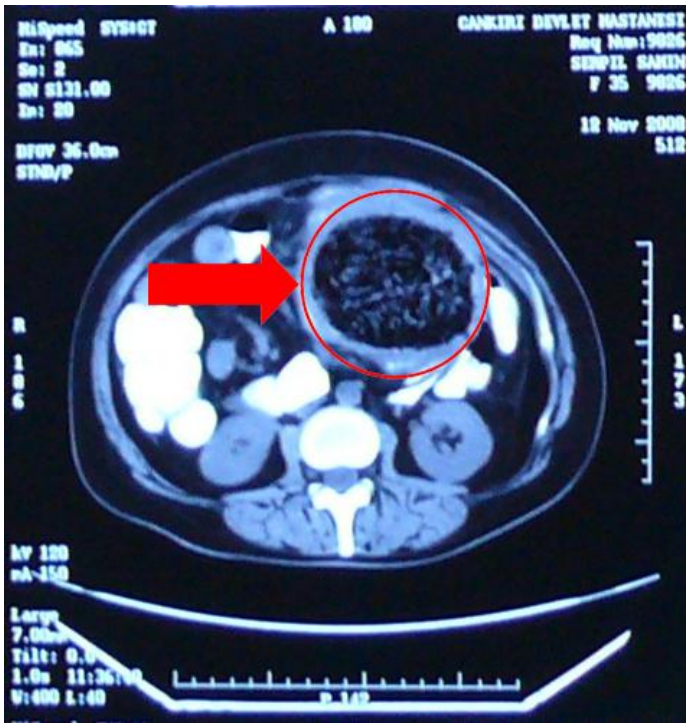

Figure 1a. Abdominal CT scan revealed a round regularly organized intra-abdominal mass containing air bubbles localized to mid-section of the mass.

Figure 1b. Surgical specimen (gossypiboma).

Discussion

A surgical sponge (gossypiboma) is the most common foreign material left in the body following completion of the operation. Gossypiboma should be especially considered in the differential diagnosis of a patient referred with post-operative abdominal pain, infection or palpable mass [2]. Incidence of gossypiboma is low in developed countries due to the advanced operation room conditions and radiological techniques. It is more frequent in women. 63-63.7 % of gossypiboma cases are comprised of female patients [3, 4]. Increased incidence in female patients may be due to high BMI, deep pelvic structure and previous gynecological operations [3-5]. Incidence of gossypiboma in intra-abdominal operations is 1/3000-5000 and the overall incidence is 1/300-1000 [1, 6]. In general, it leads to two types of well known reactions. In the first type, it causes exudative reaction and thus, it is recognized in the early phase. In the second type, it may lead to formation of mass in conjunction with aseptic fibrotic reaction against cotton material. Omentum and intestines may surround intra-abdominal sponges and they resultantly cause pseudo-capsule formation. The increased pressure due to intra-abdominal mass and irritation of the sponge on the bowel loops can lead to necrosis of the intestinal wall partially or entirely. This process can lead to obstruction or fistula [7]. Due to malabsorption and obstruction arising from intestinal fistulas and intra-luminal bacterial overgrowth in patients, patients may experience abdominal pain, nausea, vomiting and weight loss as it was in our patient. Our case corresponds to the second type of gossypiboma. CT examination should be performed in patients with gossypiboma and sometimes, it is the only required test. Sponge appears in CT examination as circular object with hyperintense central section and wall. Other differentiating image features of sponges or surgical towels include air entrapment and cystic mass with unfold density that is featured as a whirl like structure [2, 8]. Prevention of cases with gossypiboma is far more important than treatment. Care in counting sponges during operation and avoiding assistant staff change are important parameters to reduce incidence of such cases. As long as minimally invasive surgical techniques are more frequently used in the operation, the number of cases will substantially decrease [1]. One of the complications arising from foreign material left in the body following operation is perforation of unnoticed adhered intestines following surgical intervention. In our case, an intestinal fistula with high flow rate developed on the third day of the postoperative period. The patient underwent a second operation on post-operative 7th day for this. It was found that perforation occurred in adhered intestine while foreign material was removed in first operation and this condition was missed during the operation. The perforated intestinal segment was resected and an end-ileostomy was performed. Aminian et al. [2] reported

their case with intestinal perforation that was missed in the first operation and had developed generalized peritonitis due to intestinal perforation at post-operative 3rd day following surgical removal of gossypiboma. Operation under emergency conditions, involvement of more than the 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 (retained foreign body) [3]. It is inevitable that gossypiboma will occur if foreign material is left within the body following the operation and thus, surgeons should always make best efforts to prevent gossypiboma by being very careful about risk factors leading to this disorder. A gossypiboma can cause complications such as perforation and adhesion to the adjacent structures. In order to reduce morbidity and mortality, the surgeon who will remove the foreign material should be aware of these complications.

References

1. Kiernan F, Joyce M, Byrnes CK, O'Grady H, Keane FB, Neary P. Gossypiboma: a case report and review of the literature. Ir J Med Sci 2008; 177: 389-91.
2. Aminian A. Gossypiboma: a case report. Cases Journal 2008; 1: 220.
3. Grawande AA, Studdert DM, Orav EJ, Brennan TA, Zinner MJ. Risk factors for retained instruments and sponges after surgery. N Engl J Med 2003; 348: 229-35.
4. Bani-Hani KE, Gharaibeh KA, Yaghan RJ. Retained surgical sponges (gossypiboma). Asian J Surg 2005; 28: 109-15.
5. Apter S, Hertz M, Rubenstein ZJ, Zissin R. Gossypiboma in the early post-operative period: a diagnostic problem. Clin Radiol 1990; 42: 128-9.
6. Dakubo J, Clegg-Lamptey J, Hodasi W, Obaka H, Toboh H, Asempa W. An intra abdominal gossypiboma. Ghana Med J 2009: 43-5.
7. Patil KK, Patil SK, Gorad KP, Panchal AH, Arora SS, Gautam RP Intraluminal migration of surgical sponge: gossypiboma. Saudi J Gastroenterol. 2010; 16: 221-2.
8. Döleş AK, Döleş FT, Güven FMK, Korkmaz I, Eren SK, Coşkun A, Gören E. Atypical abdominal pain and gossypiboma. Cumhuriyet Med J 2011;33:106-8.