

## Gossypiboma: A Lesson to Learn: Case Report

### Gossipiboma: Öğrenilecek Bir Ders

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**ABSTRACT** The term "gossypiboma" denotes foreign bodies retained after surgery. The most common gossypiboma is the iatrogenic surgical sponge. Usually, hysterectomy, appendectomy and cholecystectomy operations are associated with these retained sponges. They may be misdiagnosed as incisional endometriosis. We present a patient who had a caesarean section operation eleven years ago with a mass at the abdominal wall between the umbilicus and the caesarean section scar on the left paramedian region approximately 5 x 2 cm in diameter. We must keep in mind that prevention is more important for cure. As we knew that most reported cases occur in the presence of a normal pack count, we think that the surgical team must be very careful in the operation room.

**Key Words:** Foreign bodies; endometriosis

**ÖZET** Gossipiboma, cerrahi sonrası vücut içerisinde unutulmuş yabancı cisimlere verilen bir terimdir. En sık görülen olgular cerrahide kullanılan gazlı bezlerdir. Genellikle histerektomi, apendektomi ve kolesistektomi operasyonları ile alakalıdır. İnizyonal endometriyozis olarak yanlış tanı alabilir. Bu olguda, 11 yıl önce sezaryen ameliyatı geçirmiş bir hastada yaklaşık 5 x 2cm boyutlarında umbilikus ile sezaryen skarı arasında sol paramedian bölge yerleşimli bir kitleyi sunuyoruz. Akılda tutmak lazım ki, tedaviden ziyade engellenmesi çok daha önemlidir. Yayınlanmış çoğu olguda gazlı bez sayımı normal olmasına karşın unutulmaktadır, bu da tüm cerrahi ekibin dikkatli olmasını gerektirmektedir

**Anahtar Kelimeler:** Yabancı cisimler; endometriyozis

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The term "gossypiboma" (The Latin gossypium (cotton) and the Swahili boma (place of concealment), denotes foreign bodies retained after surgery. The most common gossypiboma is the iatrogenic surgical sponge. Usually, hysterectomy, appendectomy and cholecystectomy operations are associated with these retained sponges.<sup>1</sup> The actual incidence of retained sponges is difficult to ascertain because of a low reporting rate. The estimated occurrence varies between 1 in 100 and 1 in 5000 laparotomies<sup>2</sup>. The aim of this case report is to alert surgeons and health care providers of this avoidable complication.

#### CASE REPORT

A 36-year-old woman (G2P2) presented with abdominal pain. Her medical history included two caesarean sections (last one eleven years ago). After the

procedure, she complained of pain at the incision site which gradually increased over the last six months especially at the menstrual bleeding days. The physical examination revealed a mass at the abdominal wall between the umbilicus and the caesarean section scar on the left paramedian region approximately 5 x 2 cm in diameter. The mass was firm, mobile and minimally-tender. also the Murphy sign was positive. The laboratory tests revealed no sign of acute cholecystitis. The gynecological examination was totally normal. The ultrasonographic examination demonstrated a 15 mm calculus in the gallbladder and a 50 x 26 mm mass at the abdominal wall just under the rectus sheath with complex echogenic foci centered by a hypoechoic region without a posterior shadowing (Figure 1). The patient was taken to the operating theatre with a diagnosis of cholelithiasis and endometrioma. After performing a laparoscopic cholecistectomy, the old caesarean section scar was incised. Intraoperatively, there was a single mass lying beneath the rectus sheath just next to the muscle. It was well encapsulated and was not adherent to the neighboring tissues (Figure 2). The mass was excised totally. Upon cutting the mass, we found a gauze swab within the mass.

The patient made an uneventful recovery and was discharged home on the first postoperative day.



**FIGURE 1:** Ultrasonographic appearance of a 50 x 26 mm mass at the abdominal wall just under the rectus sheath with complex echogenic foci centered by a hypoechoic region without a posterior shadowing.



**FIGURE 2:** Mass lying beneath the rectus sheath.

## DISCUSSION

A foreign body left behind within the body during surgery is not rare despite the extreme caution of the surgical teams. Usually, there are two types of foreign body responses that can occur.

The first type is exudative in nature and often leads to abscess formation which causes earlier and more severe symptoms than the second type.<sup>3,4</sup> The acute presentation typically consists of local inflammatory reaction. If it becomes infected, an abscess forms. The differential diagnosis in such cases includes post-operative collection, hematoma, and non-foreign body abscess.

The second type leads to an aseptic foreign body granuloma with fibroblastic reaction and complete encapsulation<sup>3</sup>. This form may not show any clinically significant symptoms<sup>4</sup>. This delayed late presentation, however, may develop years after the initial surgery which makes the diagnosis difficult<sup>4</sup>. Here in the case, the differential diagnosis included insinual endometrioma, desmoid tumor, sarcomas of the rectus muscle.

Ultrasonography of retained surgical sponges may be diagnostic.<sup>5</sup> Several different features may be seen with brightly echogenic wavy structures present in a cystic mass showing acoustic shadowing posteriorly that changes with direction of the ultrasound beam. Computerized tomographic scanning may also show gas trapped between the surgical sponge fibres, calcification of the cavity wall in long standing cases and contrast enhancement of the

rim.<sup>6</sup> All of these features may not be distinguishable from other intra-abdominal abscesses. Generally, magnetic resonance imaging shows a mass with variable signal intensity dependent upon the amount of fluid and protein accumulation.<sup>7</sup> But any of the diagnostic procedures are accurate. Mostly, diagnosis is made intra-operatively. So, gossypiboma has to be kept in mind at patients with prior surgical history.

On the other side, prevention is easier than treating gossypiboma! There is no experimental evidence that addresses the main cause of retained foreign bodies, but we suggest that these events occur because of poor communication between the surgical team, multiple personnel change, hurried count after long procedures, distraction of the personnel in charge during counting. As we know most reported cases of gossypiboma occur in the presence

of a normal pack count, a correct sponge count should not exonerate the surgeon, who is expected not to leave anything behind.<sup>8</sup> Also radioopaque markers can help the diagnosis but not helpful for the retention.

We conclude that new technological instruments for the detection of sponge such as scanners or detectors, may make it easy to recognize what's left behind. Bar-coding instruments seems to be a good indicator. But technological support may increase the cost, which is more important for developing countries. So, double counting of the gauze pieces before and after the closure of the whole abdominal wall, prevention of hurried counts, additional counts if needed (recommended when there are changes in theatre personnel), avoidance of pack usage during fascial closure will be helpful for the prevention of retained surgical sponge.

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