INTRODUCTION

Gossypiboma is used to describe the forgotten cotton/gauze piece in the body after the surgical procedure. It is formed by the combination of the words “gossypium”, a Latin word for cotton, and the word “boma” in Swahili, which means the place of hiding. Although many different materials have been reported in the literature, cotton materials are among the most forgotten objects. Though there is no consensus, the incidence is given as 0.01-0.001%. Gossypiboma, which is more common after abdominal and pelvic surgery, has also been reported after thoracic surgery, spinal, orthopedic, and breast surgery. This article aimed to present five gossypiboma cases.

CASE REPORTS

The patients who were operated with the pre-diagnosis of gossypiboma between February-2012 and October-2018 were retrospectively analyzed. The data were obtained from personal and computer records. Necessary permissions were obtained from the hospital administration and informed consent form was obtained from all patients. Patients who lacked sufficient data were excluded. Gender, initial surgical diagnosis, time passed until diagnosis of gossypiboma and symptoms were evaluated.

Gossypiboma was removed from five cases (Figures 1 and 2). The mean age was 42±10.27 (27–54) years and the ratio of female/male was 1/4. The longest diagnosis period after the first operation was two years and the shortest was the third day after surgery (Table 1).

FIGURE 1 - Coronal computerized tomography view of the patient (blue arrow=uterus; yellow arrow=gossypiboma)

FIGURE 2 - Sagital computerized tomography view (yellow arrow=gossypiboma)
TABLE 1 - Demographic values of the patients

| Patient | Age | Gender | Previous disease | Performed surgery | Time passed after first surgery | Compliant | Diagnostic method | The second surgery |
|---------|-----|--------|------------------|-------------------|-------------------------------|-----------|------------------|-------------------|
| 1       | 27  | M      | Acute appendicitis.| Appendectomy      | 4 days                        | Abdominal pain, nausea, vomiting | Laparoscopic exploration | Laparoscopic foreign body excision |
| 2       | 38  | F      | Ileus after C/S   | C/S               | 5 days                        | Abdominal pain, nausea, vomiting | Oral + IV contrast-abdominal CT | Foreign body excision |
| 3       | 43  | F      | Uterine atony after C/S | Hysterectomy | 3 days                        | Ileus | IV contrast-abdominal CT | Foreign body excision |
| 4       | 54  | F      | --               | Hysterectomy      | 1 year                        | Abdominal distension, indigestion, abdominal pain | Oral + IV contrast-abdominal CT | Small intestine resection + foreign body excision |
| 5       | 48  | F      | Right breast CA  | Right MRM         | 2 years                       | Swelling at the site of the wound | U/S PET-CT | Foreign body excision |

DISCUSSION

The incidence of gossypiboma has been reported less frequently not because of the legal consequences of its findings, but also because many patients remain asymptomatic. However, if a number is to be given, 1/1000 to 1/1500 occur in intra-abdominal operations. Clinical presentation is variable and depends on the location of the foreign body and the type of body reaction. Forgotten intraabdominal foreign bodies manifest themselves with ileus, intra-abdominal masses, postoperative abdominal pain, nausea and vomiting. Again, extra-abdominal forgotten objects should be differentiated from malignancies due to mass like image.

Imaging procedures for diagnosis are mainly aimed at revealing the cause. Ultrasonography is a cheap, easy to use diagnostic method in every hospital for intra-abdominal etiological explorations. It may also help in the differential diagnosis of extra-abdominal lesions as in our 5th case. However, it may not be sufficient to evaluate the abdominal organs in cases such as ileus. Computed tomographic examinations will be useful for the differential diagnosis of ileus findings. In this way, an obstructive lesion or adhesions due to previous operations can be distinguished.

Once the diagnosis has been made, it should be removed even if the patient is asymptomatic. Open or laparoscopic technique may be chosen in preliminary diagnosis of gossypiboma. We performed laparoscopy in the patient who underwent open appendectomy and re-exploration due to abdominal pain. We performed re-laparotomy in other patients. The most important advantage of laparoscopy is of course whole abdominal exploration. Laparoscopy should be planned and applied especially in suspicious cases. While surgical excision of gossypibomas in the extra-abdominal area is performed, previous diagnosis should be taken into consideration. As in our 5th patient with a history of malignancy surgery, the excision of these structures should still be appropriate for cancer surgery.

The primary requirement to diagnose is suspicion. However, most of the time, it can be diagnosed as a result of tomography. Their characteristic appearance is that they have a spongy appearance. However, in some studies, it is emphasized that differential diagnosis should be made especially with fungal infections. Also in this study, tomography was used to detect foreign bodies that were forgotten especially in the abdomen. Axillary involvement is evaluated as recurrence and lymphadenopathy after PET-CT imaging during oncologic follow-up for the body in the axilla. Ultrasonography had a pre-diagnosis of foreign body.

When the literature is examined, it is determined that gossypibomas are mostly reported after abdominal and pelvic surgeries. However, it has also been reported after thoracic surgery, spinal, orthopedic and breast surgery. Our study, which has a small number of cases, reviewed the situation in the areas related to the general surgery clinic and is naturally mostly from the abdomen. In one of our cases, forgotten sponge after a modified radical mastectomy was removed from the axilla, similar to Boussaid et al.

The incidence of gossypiboma is increasing and, more importantly, it is a legal problem. For this reason, preventive measures should be taken in the operating room, and especially the scrub nurses and assisted health personnel should be trained on the subject.

REFERENCES

1. Manzella A, Filho PB, Albuquerque E, Farias F, Kaecher J. Imaging of Gossypibomas: Pictorial Review American Journal of Roentgenology 2009; 193:6_supplement, SM4-S101
2. Kanji A, Soubani AO, Tabaja H, El Zein S, Fares M, Kanji N. Migrating gossypiboma mimicking aspergilloma twenty years after mediastinal surgery. Respir Med Case Rep. 2018; 25:184-186
3. Boussaid M, Mesrati MA, Jouirou R, Abdejlil N, Zakhama A, Chadly A, Aissaoui A. Breast Textiloma: An unending mediico-legal issue about a surgery. Respir Med Case Rep. 2018; 25:184-186
4. Akbulut S, Anikanoglu Z, Yagmur Y, Basbug M. Gossypibomas mimicking a splenic hydatid cyst and ileal tumor: a case report and literature review. J Gastrointest Surg. 2011; 15(11):2101-7
5. Silva SM, Sousa JB. Gossypiboma after abdominal surgery is a challenging clinical problem and a serious medicolegal issue. Arq Bras Cir Dig. 2013;26(2):140-3
6. Çetin O, Çim N, Aköz I, Kolusar A, Gül A. “Laparoscopic management of gossypiboma”. Eastern Journal of Medicine 2014; 20: 114-116
7. Kokubo T, Itai Y, Ohtomo K, Yoshikawa K, Iio M, Atomi Y. Retained surgical sponges: CT and US appearance. Radiology 1987; 165:415-418
8. Nomori H, Horio H, Hasegawa T, Naruke T. Retained sponge after thoracotomy that mimicked aspergilloma. Ann. Thorac. Surg. 1996; 61(5):1535–1536.