

## CASE REPORT

# Gossypiboma, Mimicking a Renal Neoplasm: A Case Report

Levent Verim, Ömer Yüksel, Çagatay Tosun

Department of Urology, University of Health Sciences, Hamidiye Faculty of Medicine, Haydarpaşa Numune Health Application and Research Center, Istanbul, Türkiye

## Abstract

Retained surgical sponges, so called gossypiboma (or textilomas), are very rare complications after surgical procedures. The estimated incidence is approximately 1/1000–1500 surgical operations but the actual incidence rate is unknown because of its medicolegal aspects. Clinical manifestations may occur early or late after surgery, depending on the type of inflammatory reaction. Ultrasound and computed tomography (CT) imaging and magnetic resonance imaging are valuable tools in diagnosing gossypibomas. Gossypiboma may appear like low density, high density or complex masses with CT. Sometimes high density capsule may be seen. Internal calcification is a rare finding. Gossypibomas may look like abscess, hematoma, pseudocyst, or tumors. Here in, we presented a rare renal gossypiboma case mimicking a renal tumor. Gossypiboma should be kept in mind at differential diagnosis of renal masses who had undergone renal surgery before.

Keywords: Gossypiboma; renal neoplasms; surgical sponge.

Gossypiboma is a term derived from the latin word “Gossypium” which means “Cotton” and word from Swahili language “Boma” which means “Hidden.” This term evokes tumoral naming and is used for sponge-like foreign objects that have been forgotten in the field of surgery. Gauze, surgical dressings, and sponges are the most frequently retained materials after surgical procedures. The diagnosis of gossypiboma is usually made during the investigation of non-specific symptoms that occur early or late after surgery, depending on the type of inflammatory reaction. Diagnosis of gossypiboma is important as it reduces the risk of morbidity and mortality.

## Case Report

A 59-year-old female patient was admitted to our clinic with a complaint of the left side pain and nausea. She had

undergone surgery for urolithiasis 8 years ago. On physical examination, a left costovertebral angle tenderness and left flank incision scar were noted.

Analysis of blood biochemistry was within normal limits. A few erythrocytes and leukocytes were found in the urinalysis. Her urinary ultrasound has a stone of 2x2 cm in the left renal pelvis and also 3x4 cm solid mass in the left kidney. Renal mass was exophytic spherical shape and has slim calcification and with suspicious contrast involvement (70–97 HU) in the computed tomography (Fig. 1).

The patient underwent open partial nephrectomy and the renal mass was removed. In addition, the left pyelolithotomy was performed in the same session. As a result of the examination of surgical specimen in pathology department, it was reported as “Textiloma” (Fig. 2). The patient

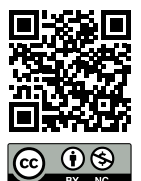
**Correspondence (İletişim):** Levent Verim, M.D. Department of Urology, University of Health Sciences, Hamidiye Faculty of Medicine, Haydarpaşa Numune Health Application and Research Center, Istanbul, Türkiye

**Phone (Telefon):** +90 216 542 32 32 **E-mail (E-posta):** leventverim@hotmail.com

**Submitted Date (Başvuru Tarihi):** 01.04.2021 **Revised Date (Revize Tarihi):** 01.04.2021 **Accepted Date (Kabul Tarihi):** 18.05.2021

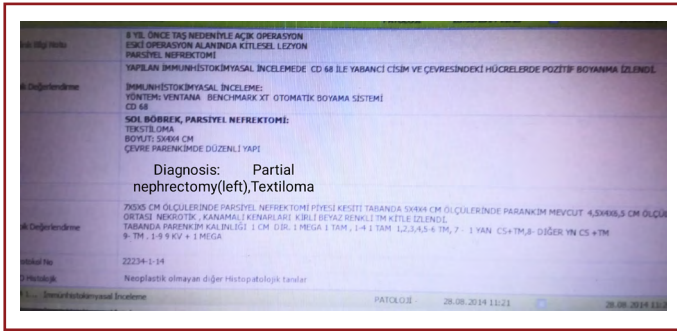
Copyright 2023 Haydarpaşa Numune Medical Journal

**OPEN ACCESS** This is an open access article under the CC BY-NC license (<http://creativecommons.org/licenses/by-nc/4.0/>).





**Figure 1.** Exophytic high density solid mass (arrow) in the left kidney and left pelvis renal stone.



**Figure 2.** Histopathology of the specimen was reported as "Textiloma".

was discharged at 5th days of surgery without any complication. An irregular contour on the left kidney was demonstrated in the ultrasound examination after 3 months.

Informed consent of the relevant patient was obtained before writing this case report.

## DISCUSSION

Intracorporeal forgotten sponges (gossypiboma or textiloma) are very rare entity in surgical procedures and occur in one in 1000–1500<sup>[1]</sup>. Gossypiboma can be seen after any surgical procedure. It is most commonly found in the intraperitoneal area. It is rare in the retroperitoneal field. Renal gossypiboma is much more rare. However, they can also be found in the chest, extremities, and breast<sup>[2]</sup>.

The widespread use of radiopaque labeled surgical sponges can easily differentiate when retained. However, in late cases, the filament may be dispersed and lost. The foreign bodies can reveal encapsulated granuloma in the late period as a result of fibroblastic reaction, as well as causing an exudative reaction and abscess formation manifested by

early non-specific symptoms. The surgical sponges are inert materials and do not usually cause any specific inflammatory reaction in the body. Hence, gossypiboma usually does not provide any obvious clinical findings such as pain and fever. The late development of abscess is important because it carries the risk of perforation to contiguous organs, adhesions, and fistulization to the skin or internally into the vagina, bladder, rectum, etc<sup>[3]</sup>.

Gossypibomas are usually detected as a mass incidentally in ultrasound or computed tomography (CT) or magnetic resonance imaging (MRI). Ultrasound characteristics of gossypiboma can be seen as cystic pattern or solid mass. The central part of gossypiboma is usually seen as hyperechoic in ultrasound and surrounding tissues has hypoechoic appearance of the reactive granuloma. In CT, gossypiboma can give a spongy appearance with soft-tissue density with well-defined capsule, as well as a high density masses with contrast-enhancement. The spongiform pattern due to gas bubbles is often considered as the most characteristic CT appearance of gossypibomas.

In MRI, they are especially seen as a soft-tissue mass with a hyperintense and well-limited capsule in T2-weighted images. In all these imaging, gossypiboma can mimic hematoma, abscess, pseudocyst, or even a tumor and diagnosis of gossypiboma is often difficult<sup>[4-6]</sup>.

As a result, gossypiboma is a surgical complication that is usually asymptomatic in the retroperitoneal area. The variable appearance of renal gossypiboma may lead to unnecessary radical nephrectomy operations. Gossypiboma should be kept in mind for differential diagnosis of well-defined solid masses in the patient who had history of the previous renal surgery. Universal rules published by American College of Surgeons in 2005 must be strictly followed for prevention of unintentionally retained surgical items after surgery<sup>[7]</sup>. Surgical intervention must be performed in a short time in case of a foreign body suspicion for overcoming the medical and medicolegal consequences that might occur.

**Informed Consent:** Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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

**Conflict of Interest:** None declared.

**Authorship Contributions:** Concept: L.V.; Design: Ö.Y.; Data Collection or Processing: Ç.T.; Analysis or Interpretation: Ö.Y.; Literature Search: Ç.T.; Writing: L.V.

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

## References

1. Jason RS, Chisolm A, Lubetsky HW. Retained surgical sponge simulating a pancreatic mass. *J Natl Med Assoc* 1979;71:501–3.
2. Yamamura N, Nakajima K, Takahashi T, Uemura M, Nishitani A, Souma Y, et al. Intra-abdominal textiloma. A retained surgical sponge mimicking a gastric gastrointestinal stromal tumor: Report of a case. *Surg Today* 2008;38:552–4. [\[CrossRef\]](#)
3. Patial T, Thakur V, Vijhay Ganesun N, Sharma M. Gossypibomas in India - A systematic literature review. *J Postgrad Med* 2017;63:36–41. [\[CrossRef\]](#)
4. Ben Meir D, Lask D, Koren R, Livne PM. Intrarenal foreign body presenting as a solid tumor. *Urology* 2003;61:1035. [\[CrossRef\]](#)
5. Mathew RP, Thomas B, Basti RS, Suresh HB. Gossypibomas, a surgeon's nightmare-patient demographics, risk factors, imaging and how we can prevent it. *Br J Radiol* 2017;90:20160761.
6. Rabie ME, Hosni MH, Al Safty A, Al Jarallah M, Ghaleb FH. Gossypiboma revisited: A never ending issue. *Int J Surg Case Rep* 2016;19:87–91. [\[CrossRef\]](#)
7. Statement on the prevention of retained foreign bodies after surgery. *Bull Am Coll Surg* 2005;90:15–6.