

# Gossypiboma Bladder: The Need to Count Sponges

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## CASE REPORT

A 65-year-old male was admitted through outpatient department with complaints of acute retention of urine, pyuria, high-grade fever and chills for 5 days. Past surgical history revealed a transvesical prostatectomy a week ago in a remote area of Gilgit. Family and social history was insignificant. On clinical examination, there was tenderness in the suprapubic region. Urethral catheterization was carried out and urine specimen was collected.

Urine detail report showed numerous pus and red blood cells, leading to the diagnosis of postoperative lower urinary tract infection. Patient was discharged home on oral antibiotics. Ten days later, the patient presented again to the emergency department with high-grade fever. An ultrasound of the urinary bladder revealed a mass in the bladder (Figure 1). CT scan showed whirl-like mass with thick walls and trapped gas (Figure 2-3). A provisional diagnosis of gossypiboma was made.

Patient underwent cystoscopy which showed a large gauze measuring 1 meter in length in the bladder. Due to difficulty in removing the gauze through the cystoscope, a suprapubic midline incision was made and the gauze was removed from the bladder. Patient was placed on appropriate antibiotics and made swift recovery. He was discharged from hospital on the 4<sup>th</sup> postoperative day.

## DISCUSSION:

Gossypiboma is derived from the Latin word 'gossypium', meaning cotton, and the Swahili word 'boma', meaning place of concealment. Although this terminology is not new, many healthcare professionals are not familiar with it. A synonym for this word is textiloma, which combines the word 'textile' (until recently most surgical sponges were made of cloth) and the suffix '-oma', meaning a tumor or growth.

Lower urinary tract symptoms is a well-known presentation of the presence of foreign bodies inside the urinary bladder. Most such cases are diagnosed incidentally during evaluation for other unrelated conditions.[2]

While the characteristic features of retained sponges described on plain radiographs include a whirl-like pattern with or without radioopaque marker, such characteristics may not be present in all radiographs.[3] Ultrasonographic features of abdominal gossypiboma have been divided into three types (i) an echogenic area with intense posterior shadow, as seen in our case; (ii) a well-defined cystic mass containing distinct internal hyperechoic wavy, striped structures; and (iii) non-specific pattern with a hypoechoic mass or a complex mass.[4,5,6] Acoustic shadowing has been reported to be present in all cases. This is thought to be due to the attenuation of beam by the sponge as well as the presence of gas and calcification.[1,4,6]

The CT scan appearance of the gossypiboma has been described as a well-circumscribed, thick-walled mass with or without gas; calcification or enhancement of the wall may be seen after administration of contrast medium.[1] The presence of gas in the mesh of sponges may give the internal structure whirl-like or spongiform appearance, the density of which may be low or complex.[5,7]

Gossypiboma usually presents as a palpable abdominal mass in a patient with past history of abdominal surgery. Such a patient may present without symptoms or non-specific abdominal complaints. An early diagnosis depends on the surgeon's high index of suspicion. In a study, the most common risk factors for retained objects after surgery were an emergent surgery, unplanned changes in operative procedure, and operating on patients with high body mass index. Gossypiboma are rarely documented, owing to medical, legal, and other reasons.[9]

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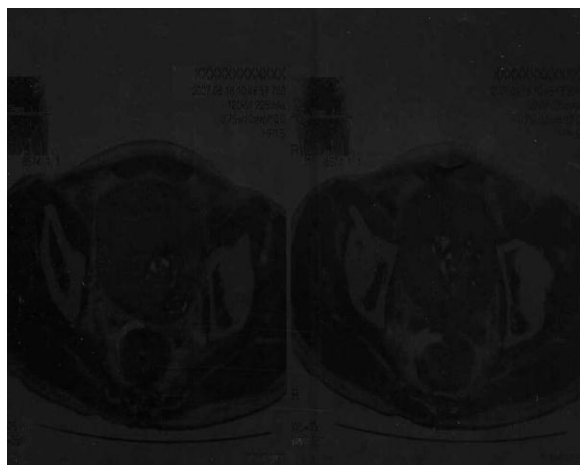
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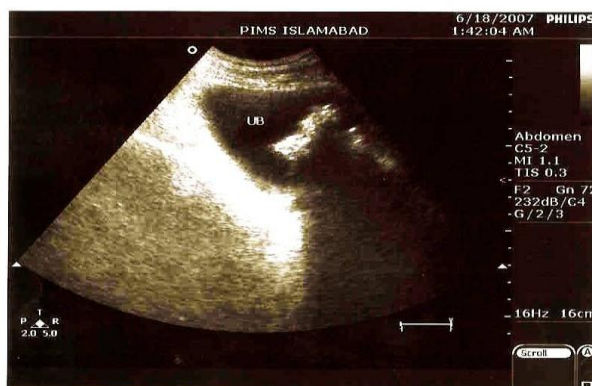
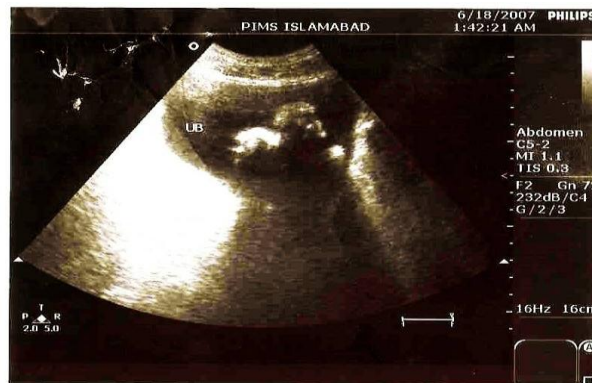
While the foreign bodies retained in the abdominal cavity during operative procedures include sponges, towels, artery forceps, pieces of broken instruments or irrigation sets, and rubber tubes,[10,11] surgical sponge constitutes the most frequently encountered object. Various features of the surgical sponge such as its common intraoperative use, relatively small size, and its amorphous structure may be responsible for making it a common retained operative object.[12] Most reported cases of gossypiboma occur in the presence of a normal pack count.[13] To prevent the occurrence of gossypiboma, Royal College of Surgeons of England

has provided guidelines for operation theater records.[14]

These suggestions include double counting of the gauze pieces before and after closure of the abdominal wall, use of surgical gauze with radio-opaque markers, additional counts when there is a change in operation theater personnel, avoidance of pack usage during fascia closure, use of intraoperative radiographs if possible, and early diagnosis when suspicious clinical or radiographic evidence is present.



**Figure 1:** CT scan of the patient with gossypiboma of urinary bladder



**Figure 2:** Ultrasonographic findings of the patient with gossypiboma of urinary bladder

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