



INSTITUTION-GAUHATI MEDICAL COL EGE, GUWAHATI

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- ❖ 29 years old female patient, hailing from Nagaon district of Assam.
- ❖ Presenting features: Patient presented on 25.02.2019 with severe local lower abdominal distension, pain & nausea for last 3 days.
- ❖ The distension and pain was located mainly in the right lower abdominal quadrant.
- ❖ There was history of continuous bloating sensation in the abdomen but stools were normal.

SIGNIFICANT PAST HISTORY

- The patient had undergone a LOWER UTERINE CAESAREAN SECTION on 28.12.2019.
- From the 6th post-operative day the patient c/o abdominal pain.
- She received some medications for these symptoms and the features subsided.
- But from 22.02.2020, these symptoms flared up & in a severe form in form of localised lower abdominal distension and pain. She visited the Gynae opd of GMCH on 25.02.2020.
- There is no history of hypertension, diabetes mellitus, tuberculosis or any other chronic disease.

EXAMINATION

- ❖ The patient was alert and cooperative.
- ❖ Pulse was 84 beats/min, B.P was 116/84 mm of Hg.

- ❖ The other parameters of GENERAL SURVEY were essentially within NORMAL limits.
- ❖ On palpation, the lower abdomen was found to be distended.
- ❖ A firm to hard lump was palpable in the right paraumbilical region in the right lower abdominal quadrant.
- ❖ Mild tenderness was also elicited in the right lower abdominal quadrant.

INVESTIGATIONS

- The patient was followed up with routine blood investigations which apparently came to be normal.
- She was then followed up with radiological investigations in form of Ultrasound as the first radiological test.

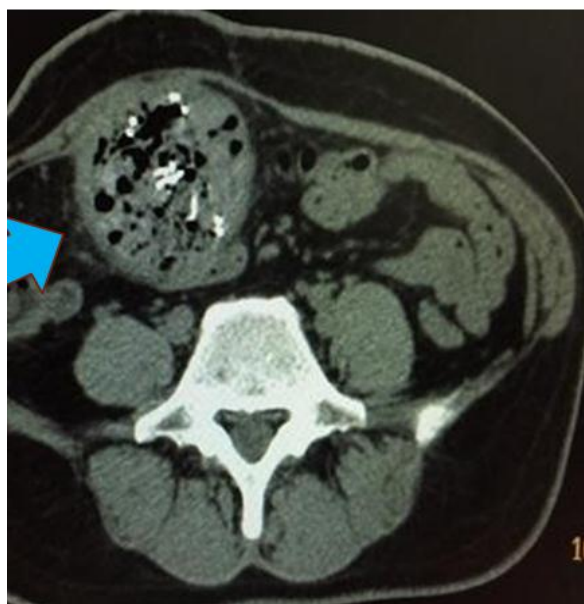
USG WHOLE ABDOMEN

- ✓ On performing the ultrasound pelvis revealed a well-defined mass containing wavy, bright, internal echogenic structure in the RIF adjacent to the ileocaecal junction.
- ✓ The structure had a hypoechoic rim and a strong posterior shadow
- ✓ The structure was causing overlying contour bulge.
- ✓ There was incidental right renal cyst noted.



❖ **CECT ABDOMEN**

- ✓ Fairly large(10*10cm) circumscribed lesion with spongiform appearance, showing heterogeneous low attenuation & gas bubbles noted in the RIF. Calcifications deposited along the network architecture of a surgical sponge.
- ✓ The CT also showed the lesion was partly compressing the terminal ileum, with no signs of intestinal obstruction.
- ✓ There was also a fistulous tract noted adjacent to the lesion.

❖ **EXPLORATORY LAPAROTOMY**

- ✓ A hard mass was found in the small gut which was adherent to the transverse colon on the superior aspect
- ✓ On further exploration a SURGICAL MOP was found admixed with collection of pus.

❖ **DIAGNOSIS**

- GOSSYBIBOMA due to SURGICAL MOP

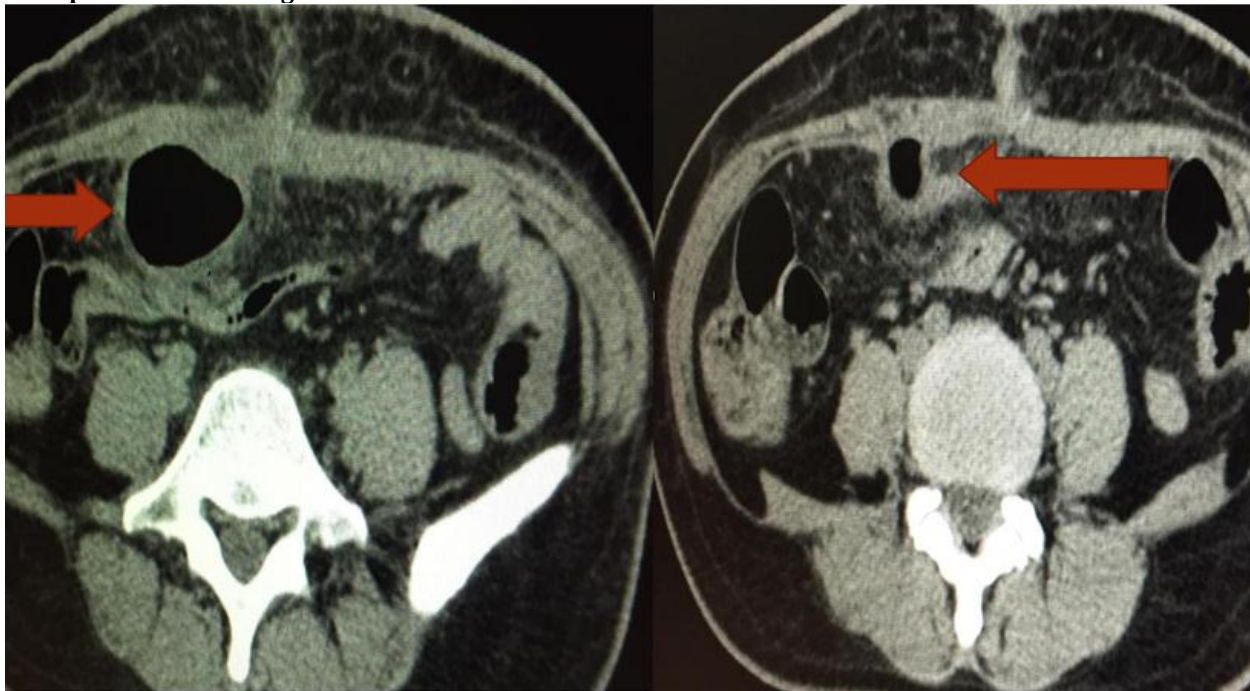


Guwahati Medical College Hospital, Guwahati, Assam
OPERATION RECORD

Patient Name: Mr. Deep Deka Age: 35 Sex: M Date of Birth: 15/05/88 Ward: 25 Bed: 10
 Ref. by: Dr. [Signature] Date of Referral: 25/05/2020 Date of Operation: 25/05/2020
 Operative Diagnosis: Pain of 4-5 with Pyogenic abscess
 Pre-operative Diagnosis: Pyogenic abscess
 Procedure: Incision & Drainage of abscess + Contingency Drainage
 Anesthesia: Local Anesthesia Surgeon: Dr. [Signature] Assistant: Dr. [Signature] Nurse: Arundhati
 Infection Control: 10% Povidone Iodine ORN: 250M
 Position: Supine Drains: None
 Incision: Lower midline incision
 Description of Findings:
 - Dense adhesions of small bowel and ant. abdominal wall.
 - Adhesions of ileum to ant. abdominal wall.
 - 10x10cm lump in ant. to transverse in the greater omentum. On exploration it revealed a localized collection of pus.
 - Pyogenic material aspirated from pelvis at 4th wall of the small bowel.
 - Peritoneal lavage given 2 lit. + irrigant.
 - Drain placed on pelvis.
 Report to sign full at the end of the Report.
 Signed: [Signature] Date: 25/05/2020
 OPERATION RECORD closed in layer.

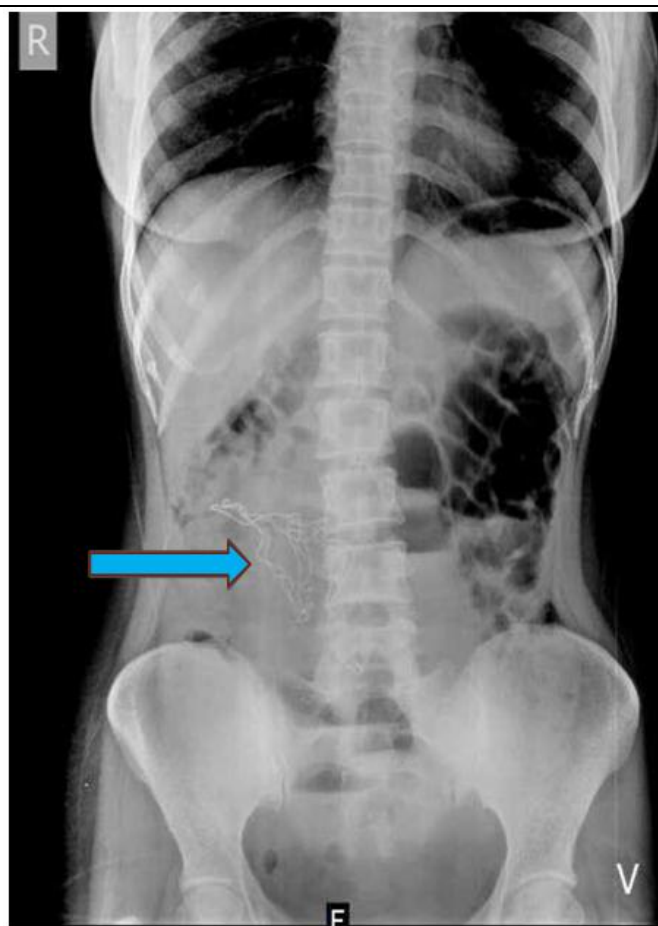
Post-Operative Ultrasound findings

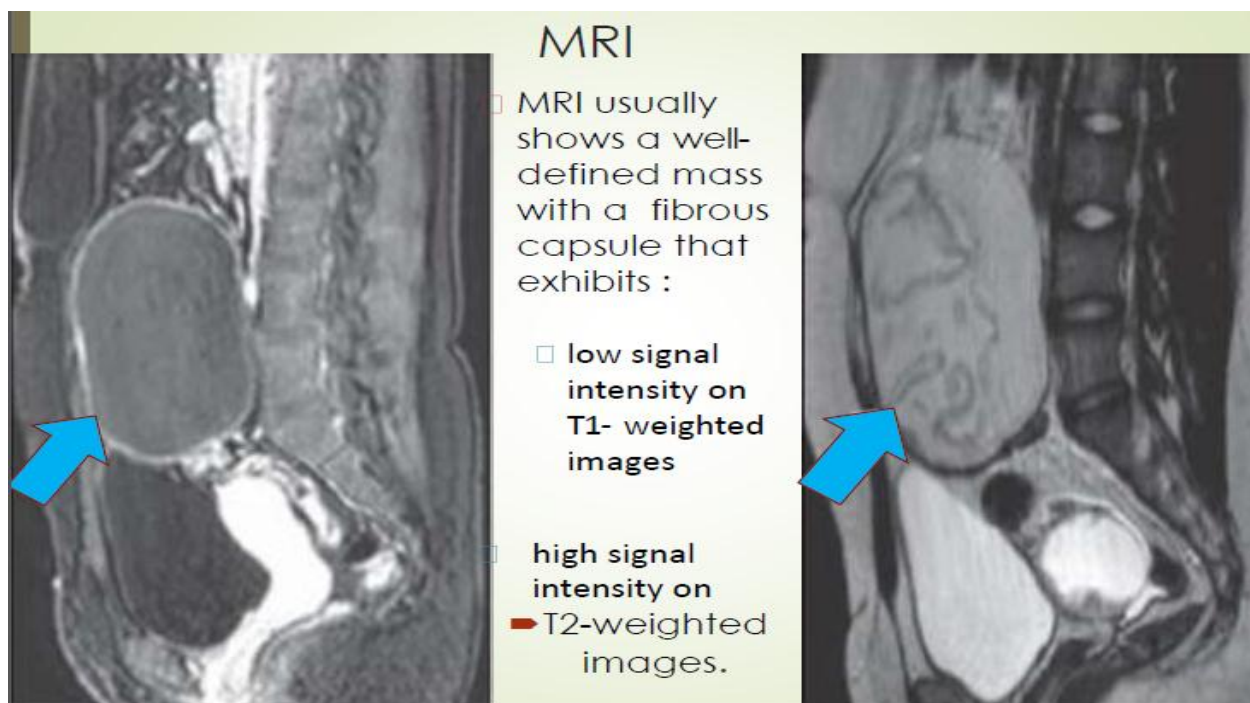


Post-Operative CT findings**Other Radiological Investigations helpful includes**

- If the sponge contains a radiopaque marker, the diagnosis can be made easily by plain radiograph

- The most impressive imaging finding are the curved or banded radiopaque lines on plain radiograph





GOSSYPIBOMA

- A surgical sponge is the most common type of retained foreign body.
- The condition is sometimes called gossypiboma, derived from the Latin *gossypium* (cotton) and the Swahili *boma* (place of concealment).

▪ Frequent sites of gossypiboma formation include:

1. Intrathoracic

- a. pleural cavity
- b. pericardial cavities

2. Abdominal cavity

- Incidence is once in every 3000 to 5000 abdominal operations.

Patho-Physiology

- Surgical sponges causes two major types of reactions-

 1. Exudative, acute inflammatory reaction, with the formation of an abscess in close proximity to the retained sponge.
 - This usually occurs in the early postoperative period and may involve secondary bacterial contamination.
 2. Aseptic fibrinous response, resulting in tissue adhesions and encapsulation and eventually foreign body granuloma.

Differential diagnosis

Abscess: CT findings of gossypiboma may be indistinguishable from those of an intraabdominal abscess.

Emerging Technologies To Prevent Gossypiboma

- Physically counting surgical items by the OT staff before and after procedures is the most common policy.
- New technologies are being developed that may increase the efficiency and accuracy of accounting

for surgical items.

- Barcode: can be applied to all sponges, and scanned with barcode scanner
- Radiofrequency identification system: sponge have RF sensors which absorbs low frequency radio waves and return it to the wand to indicate its presence.
- Electronic tagging of surgical sponges involves a device that gives off a signal indicating its presence when it is swept across a surgical site.



GOSSYPIBOMA

Take Home Message

The diagnosis of a **GOSSYPIBOMA** is not often easy, and delayed diagnosis can be problematic.

Awareness of the typical radiologic appearances is critical to the diagnosis of retained surgical sponges or swabs.

Inadvertently retained sponges are often clinically unsuspected and may be first recognized on imaging.

Retained ForeignBody should be considered in the

differential diagnosis of any postoperative patient who presents with pain, infection, or palpable mass

GOSSYPIBOMA

REFERENCES

1. Kim CK, Park BK, Ha H. Gossypiboma in abdomen and pelvis: MRI findings in four patients. *AJR Am J Roentgenol*, 2007; 189(4): 814-7.
2. Murphy CF, Stunell H, Torreggiani WC. Diagnosis of gossypiboma of the abdomen and pelvis. *AJR Am J Roentgenol*, 2008; 190(6): W382.
3. Lo CP, Hsu CC, Chang TH. Gossypiboma of the leg: MR imaging characteristics. A case report. *Korean J Radiol*, 4(3): 191-3.
4. Haaga JR, Boll D. *CT and MRI of the whole body*. Mosby, 2009. ISBN: 0323053750.
5. Manzella A, Filho PB, Albuquerque E et-al. Imaging of gossypibomas: pictorial review. *AJR Am J Roentgenol*, 2009; 193(6): S94-101.