

Electrolyte Imbalance in a 42 year old Nigerian business woman following a Caeserian Section Complicated with Gossypiboma: A Case Report

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Abstract: Gossypiboma is an uncommon surgical complication and this term is used to describe a condition in which there is retention of surgical sponges in the body after surgical operation. The incidence of gossypiboma is 1 in 1000 to 15,000 intra-abdominal operations. Gossypiboma may lead to severe complications which eventually lead to death of the patients involved. Here in we report the case of a 42 year old Nigerian lady who presented with abdominal pains, mass, severe vomiting and electrolyte imbalance. She had a surgical history of cesarean section about 15 months earlier performed by another doctor in another hospital. The mass was located at the right iliac fossa (RIF) and was suspected after a computed tomography (CT) scan. Exploratory laparotomy was done and the intra-operative finding was a large cotton swab fistulating out of the colon, confirming the diagnosis. Electrolyte imbalance due to severe vomiting has varied causes and can lead to death. A detailed history should be taken for all patients with vomiting. Foreign body in the gastrointestinal tract (GIT) should also be looked out for as a possible cause.

Keywords: Gossypiboma, caeserian section, electrolyte imbalance

INTRODUCTION

Gossypiboma refers to a cotton foreign body that is left retained inside a patient during surgery[1]. The word is derived from the latin word "gossipium" which means cotton and a Swahili word "boma" which means "a place of concealment"[2].

It is an uncommon surgical complication [3-6] and is usually underreported because of the legal implication. This has also made the exact incidence to be inaccurate[7]. However, it is estimated that retained surgical sponges is reported to occur once in every 3,000 to 5,000 abdominal operations[8].

The incidence of retained foreign objects following surgery has a report rate of 0.01% to 0.001%, of which gossypibomas make up 80% of cases[2].

A number of foreign bodies have been discussed, which have been retained in abdominal cavity during the course of surgical procedure. These include surgical sponges or gauze, towels, artery forceps or pieces of broken instruments, irrigation sets and rubber tubes[9].

Retention of surgical tools in the body after surgery been reported in both sexes and in all age groups, but are more common in adults. A study done in 2008 reported to the annals of surgery that mistakes in

tools and sponge counts happened in 12.5% of surgeries[10].

CASE PRESENTATION

OJ was a 42 year old Nigerian businesswoman and a mother of 6 children. She presented with a history of recurrent left sided colicky abdominal pain, severe nausea and vomiting, weight loss and a recent history of difficulty in passing stool. The patient denied any trauma to the anterior abdominal wall. Past history revealed that she had caesarian section about 1 year and 3 months earlier by a doctor in another health institution. She was not a known hypertensive, diabetic nor alcoholic.

Examination revealed a middle aged lady in painful distress, severely dehydrated, mildly pale, and afebrile with no pedal pitting edema. She was anicteric, conscious and alert and well oriented in time, place and person. Abdominal examination revealed the presence of a Pfannestiel scar measuring 1.3 cm by 10cm diameters located at the suprapubic region.

Her pulse rate was 70bpm, full volume, regular with a blood pressure of 130/85mmHg. Other system examination did not reveal anything significant.

Basic investigations done include full blood count, electrolyte, urea and creatinine (e/u/cr), chest and

abdomino- pelvic X-rays, mantoux test, stool for occult blood, Urine m/c/s, abdominopelvic ultrasonography, computed tomography(CT) scan and barium enema.

The presence of foreign body in the abdomen was suggested following the CT scan and exploratory laparotomy was suggested. At laparotomy, adhesions were seen with a fistulated surgical cotton oozing out fecal matter. Careful cleaning of the area showed a forgotten towel in the sigmoid colon which was carefully pulled out. The gangrenous section of the colon was resected and followed by an end-to-end anastomosis of the gut. Apparently, in the process of doing the CS, the surgeon mistakenly cut the gut, packed it with surgical towel to prevent fecal matter from oozing out. He then sutured the ligated gut (anastomosed gut with poor healing tissue were seen intra-operatively.

The surgeon later forgot the towel in the process of suturing the gut. This forgotten towel had led to partial and eventually to full intestinal obstruction in the woman. This had led to the excessive vomiting with resultant dehydration and electrolyte imbalance viz hypokalamia, hypochloraemia, increased blood pH with metabolic alkalosis. The surgery was done and patient was symptom-free for 5 days after the surgery.

Abdominopelvic ultrasonography

There was minimal probe tenderness over the left iliac fossa with bowel gas shadows preventing proper insonation and visualization of the structures therein. The remaining intra-abdominal and pelvic organs were preserved. No intra-abdominal collection seen.

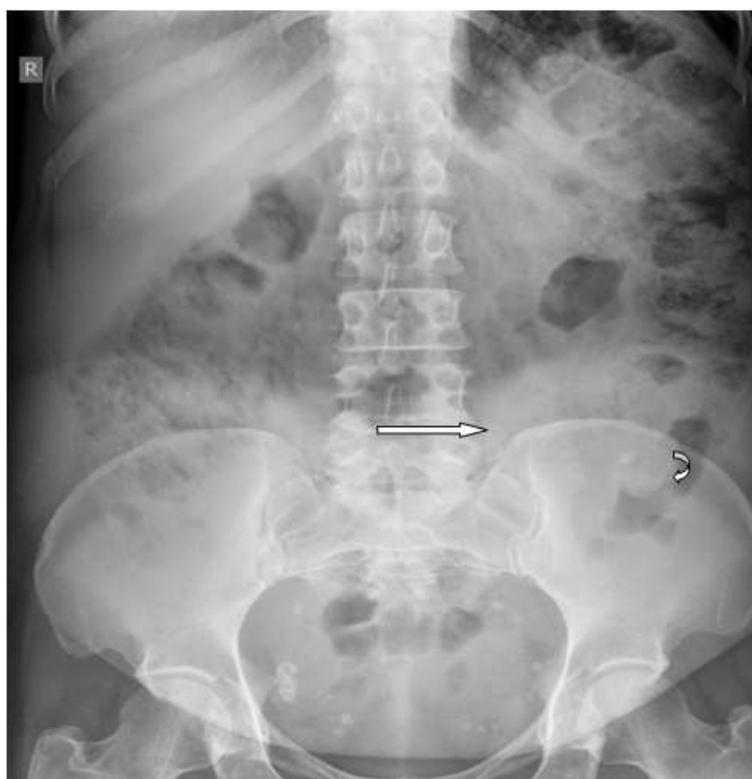


Fig-1: Plain anteroposterior abdominal radiograph showing a vague opacity of soft tissue (straight arrow) density with subtle internal lucencies in the left iliac fossa with a lobulated filling defect (curved arrow) within the adjacent sigmoid colonic loop. Punctate fecal gas lucencies were noted in the regions of the ascending, transverse and descending colonic loops.

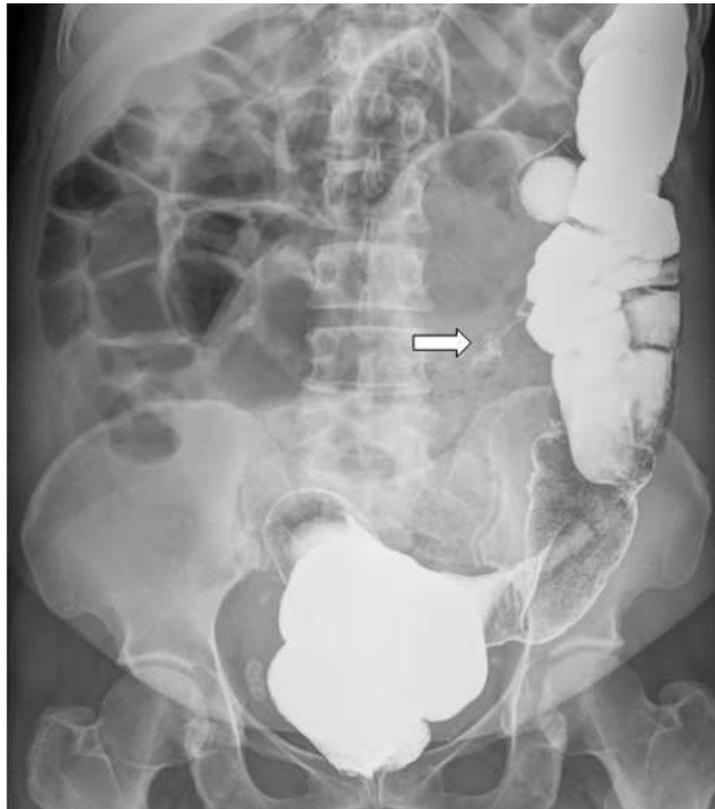


Fig 2: Anteroposterior barium enema view depicting a minimal region of extraluminal, likely intraperitoneal leakage of contrast medium (arrow), adjacent to the descending colon, within the vague rounded opacity of soft tissue density with subtle internal lucencies in the left iliac fossa. The descending colonic loop and the rectum are contrast filled with a double contrast view, from partial filling, observed within the sigmoid colon



Fig 3: Coronal abdominal computed tomographic image showing a thin-walled ovoid left flank mass (arrow) with internal whorl-like pattern (characteristic of cotton woven materials) and air density spaces.

DICUSSION

A gossypiboma refers to a foreign object such as cotton mass or sponge that is left in the body after a surgical procedure[1].

Sites of gossypiboma formation include thoracic cavity, pleural cavity, pericardial cavity and abdominal cavity[11].

PATHOLOGY:

Usually, as the foreign body is retained, the body reacts and responds in two ways: Exudative and aseptic fibrous reaction. Exudative gossypiboma occur in the postoperative period and may lead to secondary bacterial contamination which eventually results in fistula formation. The index patient had fistula at the sigmoid colon following the retention of the foreign object. It is very rare for a foreign body to completely migrate into the gastrointestinal that without an apparent opening in the intestinal wall[11]. Gauze, sponges and towels are the most forgotten materials after surgical operations. Gossypiboma is most frequently seen in paraspinal muscles, intrathoracic region, legs, shoulders and pericardial space[4,6].

Asceptic gossypiboma result in adhesion, encapsulation, and eventually foreign body granuloma[12].

CLINICAL FEATURES

The patient with gossypiboma usually present in two forms – acute and chronic. Acute form is usually from first few daysto weeks after surgery. Persistent pains, fever, tachycardia and wounds complications and ileus may also be the features. Chronic presentation presents with abdominal pains, lumps, and features of intestinal obstruction. This usually takes months to years before they manifest[9]. Generally, abdominal gossypiboma may present with abdominal pain, abdominal swelling, intestinal obstruction, GIT hemorrhage, intra-abdominal sepsis, granulomatous peritonitis and fistula formation[13].

Gossypiboma can often present clinically or radiologically similar to tumors and abscesses, with underlying variable complications and manifestation making diagnosis difficult and causing significant patient morbidity[10-11]. If foreign bodies are too large (e. g towel) to move into the intestinal lumen, they cause intestinal obstruction[15].

DIAGNOSIS

Usually clinical features may be nonspecific and that makes diagnosis difficult. Application of imaging techniques and high index of suspicion will usually give a diagnosis .Imaging techniques will usually involve the use of CT scan[12]. In some places, the use of surgical sponges containing radio- opaque

materials facilitates detection by standard abdominal radiography.

However, in many centers where normal sponges are used, identification of these sponges is very difficult by standard radiographic and even CT imaging. This makes diagnosis very difficult. This is particularly so in our country which materials having radio opaque are not used in most health centers. Sometimes, gossypiboma may be misdiagnosed as a tumor[13-14].

SUMMARY AND CONCLUSION:

- This index case should be used to make a case for the use of surgical sponges containing radio-opaque materials in Nigeria.
- The lack of the above made our diagnosis difficult.
- So it is important we emphasize the above.
- Retrospectively images can be said to have indicates that diagnosis whereas hitherto muscles cos of semittance to fecalmonen.

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