



## MULTIPLE METALLIC FOREIGN BODIES FORMING JEJUNAL MASS WITH PERITONITIS - A CASE REPORT

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**Abstract :** Foreign body ingestion is common in paediatric age group but rare in adult. Multiple foreign bodies ingestion is very rare . Though its presentation is quite common in psychiatric patients presentation to the emergency room as a primary case is challenging . This is a case report of a 29 yrs old male patient who ingested multiple metallic foreign bodies and presented to the emergency room with acute abdomen with peritonitis that required emergency laparotomy

**Keyword :** Metallic foreign bodies , jejunum , CT scan , surgical exploration.

### INTRODUCTION

Most of the foreign bodies pass through the gastrointestinal tract without any consequence. Foreign bodies, longer than 5 cm and wider than 2cm, that are accidentally or intentionally swallowed rarely pass through the stomach.<sup>1,2</sup> Most of the shorter than 2 cm objects usually pass through the gastrointestinal tract with no incident ,<sup>3</sup>with less than 1% resulting in bowel perforation ,<sup>2</sup> those that cause bowel perforation are usually elongated or sharp.<sup>4,5</sup> Although injury may occur at any level from mouth to anus, perforation is more likely at certain anatomic sites where foreign objects may become arrested due to acute angulations or narrowing of the lumen of the bowel.<sup>6</sup> The duodenum and terminal ileum are the most frequent sites of perforation beyond the esophagus.<sup>6</sup> This is a rare case as multiple foreign bodies forming jejunal mass with obstruction with perforation and peritonitis

### CASE REPORT

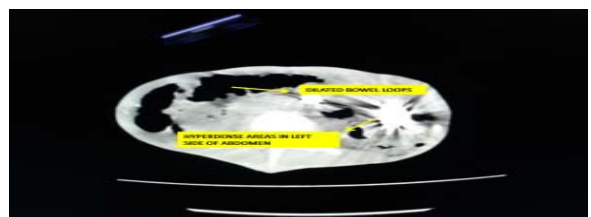
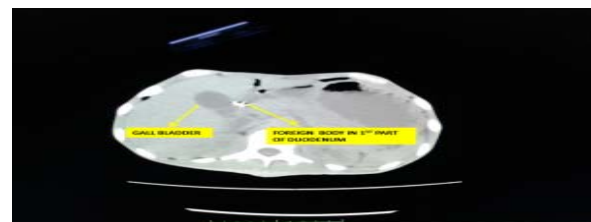
29 yrs old Male patient a known case of psychiatric illness defaulter treatment for 3 months came with symptoms of abdominal pain for 3days, sudden onset , progressive nature , pricking type , not associated with food intake , no aggravating, relieving factors . Not passed stools for 2 days, vomiting for 2days , abdominal distension for 2 days Physical examination revealed patient conscious , oriented, afebrile , emaciated, anaemic, hypotension ,tachycardia . Abdomen mildly distended, vague mass felt in the left hypochondrium extend to the umbilical region, tenderness all over abdomen, bowel sounds not heard, guarding and Rigidity present.

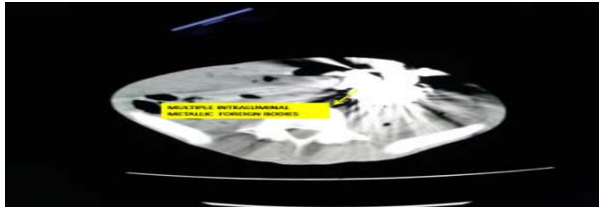
X-RAY abdomen erect shows radio opaque areas noted in left side of abdomen.

FIGURE ;1 X-RAY ABDOMEN ERECT- radio opaque areas seen in left side of abdomen



CT scan abdomen taken and it shows hyper tense areas noted in left hypochondrium. Intraluminal metallic foreign bodies multiple air pockets & dilated bowel loops noted.





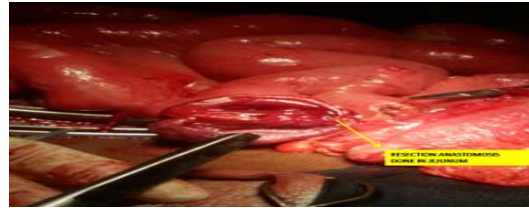
**FIGURE 2 ; CT SCAN ABDOMEN - Hyperdense areas noted in left hypochondrium. Multiple air pockets & dilated bowel loops seen.**



**FIGURE 3 ; PRE OPERATIVE PICTURE - 10\*15 cm mass felt in left hypochondrium.**

#### **OPERATION**

Under GA – Midline laparotomy incision abdominal layers opened. Minimal free fluid + , A 10 \*15 cm mass found in jejunum 15 cm from DJ junction. A pricked sharp needle found in 1st part of DU & removed , no leak present . Multiple metallic foreign bodies & glass pieces protrusion palpated in that mass , 0.5\*0.5 cm perforation noted. Along with that perforation we removed multiple metallic foreign bodies like coins, dollars pins, needles ,chains, glass pieces & magnet about 58 numbers of foreign bodies. FB removed along with 10 cm of bowel resected. Resection & anastomosis done in jejunum .Other small bowels and solid organs normal . As the pt has swallowed 2,3 pieces of magnet along these metallic foreign bodies got crumbled at this level and formed a mass with obstruction . FJ done. Intra operative period - uneventful



**FIGURE 4 ; Resection & anastomosis done in jejunum 15 cm from dj junction**



**FIGURE 5 ; 58 METALLIC FOREIGN BODIES REMOVED FROM GIT**

Pt shifted to ICU . Psychiatrist opinion –diagnosed as CHRONIC SCHIZOPHRENIA & inj. Haloperidol , lorazepam started . Duty physician & chest physician opinion obtained. Pt extubated on 3rd POD.FJ feeding started on 4th POD . Pt doing well . Oral feeding started on 6th POD. Left DT removed on 7th POD. Rt DT removed on 8th POD . Pt handed over psychiatric department



**FIGURE 6 ; POST OPERATIVE PHOTO OF THE PATIENT**

#### **DISCUSSION**

Gastrointestinal foreign bodies represent a significant problem, causing a surprising percentage of morbidity and mortality.<sup>6</sup> The complications related to the ingestion of foreign bodies may include localized mucosal ulceration, thickening, obstruction<sup>7,8</sup> or perforation.<sup>3</sup> It is estimated that 1000-2000 people in the USA die each year from such complications related to the ingestion of foreign objects.<sup>7,10</sup> Risk groups include children, psychiatric and alcoholic patients. Foreign body series differ by geographical area. In Greece the common use of wire material to prepare meals of lamb roast on a spit, which is a traditional Greek dish, seems to provide pointed foreign objects of peculiar shape that may carry a significant risk of intestinal perforation after ingestion . Unfortunately, most sharp or pointed foreign bodies such as toothpicks, bones, needles, nails, dental prostheses, razor blades, and safety pins are ingested unknowingly by many adult individuals,<sup>5,6</sup> and are associated with high morbidity and mortality, mostly due to delayed diagnosis.<sup>6,11</sup> Foreign bodies longer than 5 cm and wider than 2 cm rarely pass through the stomach.<sup>1,2</sup> Anatomic areas where foreign objects have a tendency to become impacted and perforate GI-tract are usually the terminal ileum, appendix, duodenum or colon. The duodenum and ileocecal valve are accessible to the potential removal by endoscopic

procedures. Although less than one percent of all foreign objects perforate the intestine, all pointed and sharp foreign bodies should be removed before they pass through the stomach since 15%-35% of them cause gut perforation<sup>2</sup>. Symptoms resulting from foreign object impaction and perforation are variable and they mimic other intra abdominal conditions so closely that the diagnosis is seldom made preoperatively<sup>2</sup>. When foreign body impaction and/or perforation are suspected, plain abdominal films, sonography, and CT scanning may all be helpful.<sup>6</sup> The effectiveness of the abdominal radiograph in detecting an ingested foreign object depends on the size and radio density of the foreign body.<sup>7</sup> In our patient, X-ray shows radio opaque foreign bodies seen. However, it must be emphasized that failure to locate an object on radiographs does not preclude its presence.<sup>6</sup> Ultrasonography may identify objects (such as toothpicks) in the abdomen as a hyper echoic straight line or as a bright hyper echoic dot with sharp posterior shadowing when viewed on end. Gastroenterologists and ultrasonographers should be aware of this possibility, particularly in patients with unexplained pain of the abdomen.<sup>6</sup> On CT scans, foreign objects including metal, wood, and bone are more readily detected. CT is also more sensitive in detecting small amounts of free gas, and better for localizing the site of perforation like in our case. The management of foreign bodies in the gastrointestinal tract is based on collected experience and not on controlled clinical trials. The use of the therapeutic flexible endoscope has substantially changed the management of foreign objects in the upper gastrointestinal tract.<sup>2</sup> Flexible endoscopy allows the retrieval of many ingested foreign bodies and is considered to be the procedure of choice.<sup>6</sup> However, the treatment for bowel perforation by a foreign object is surgical exploration and repair. In particular, if a sharp foreign body does not progress for three consecutive days, surgical intervention should be considered and if the patient becomes symptomatic, surgical intervention will be necessary.<sup>2</sup> The surgical revolution that followed the successful introduction of laparoscopic cholecystectomy encouraged surgeons to try to apply this minimally invasive technique instead of other procedures. The laparoscopic removal of foreign bodies from the peritoneal cavity (translocated intrauterine contraceptive devices) and a needle from the pelvis have been reported previously, but the laparoscopic removal of a foreign body from within the gut has not been tried yet due to unsolved technical problems.

#### CONCLUSION

When known, majority of patient with foreign body ingestion that reaches the stomach can be managed expectantly, unless signs of peritonitis or features of obstruction appear where surgical intervention is indicated like in our case. However in children, elderly, prisoners or psychiatric patients like in our case unclear cause of acute abdomen, possibility of bowel perforation due to foreign body should always kept in mind.

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