Case report

A case of incidentally detected gastric outlet obstruction in a patient with foreign body ingestion

ABSTRACT

BACKGROUND: This case report discusses our experience of managing a case of metal key ingestion with incidentally detected gastric outlet obstruction by trial of endoscopy followed by surgery.

PRESENTATION OF CASE: A case of 21 years old male prisoner presented with 2 days history of ingestion of metallic key and postprandial vomiting with history of mild abdominal distension and upper abdominal pain with no previous significant history. Clinical examination was unremarkable. Patient was kept nil per orally and serial Xray were taken which showed movement of foreign body following which CT abdomen and pelvis was done due to doubtful location in Xray. In CT over distended stomach measuring approximately 25 x 10 cm with metallic foreign body 4x2 cm noted in the stomach following which patient was posted for endoscopic retrieval of foreign body. In endoscopy, food stasis was noted in stomach with pinpoint pylorus, scope couldn't be negotiated beyond pylorus, key couldn't be visualised. Due to repeated vomiting and abdominal pain, patient was planned for emergency operation and underwent gastrotomy with key retrieval with gastrojejunostomy with truncal vagotomy with feeding jejunostomy. Patient had an uneventful recovery and was discharged on post operative day 25.

DISCUSSION: Late-onset pyloric stenosis is due to the persistence of the infantile form, which becomes clinically evident only at a later stage, when a triggering event,like foreign body ingestion resulting inflammation, edema, or spasms, which precipitates pyloric occlusion.[1] Acute inflammation of pylorus can lead to gastric outlet obstruction manifested by early satiety, anorexia, weight loss, nausea, vomiting. In chronic inflammation, stomach can become massively dilated and lose its muscular tone. 12% of patients with peptic ulcer presented with gastric outlet obstruction as a direct consequence of a pyloric canal ulcer with associated pylorospasm.[2]

CONCLUSION: Asymptomatic presentation of gastric outlet obstruction is rare, and hence, should be kept in mind in such situations of retained foreign body where it can cause acute inflammation and exacerbate gastric outlet obstruction.

Key words: key, endoscopy, gastric outlet obstruction, gastrojejunostomy.

INTRODUCTION:

Foreign body ingestion in adults is relatively uncommon accounting to almost 15-20% of cases.[3] Unintentional ingestions are usually those of meat or fish bones. Intentional ingestion is mostly observed in people who are intellectually impaired, have psychiatric illness, prisoners or edentulous. Gastric outlet obstruction can be due to extrinsic and intrinsic factors. Rarely, a retained foreign body can cause acute inflammation and exacerbate gastric outlet obstruction[4]. According to American Society for Gastrointestinal Endoscopy guideline for management of ingested foreign bodies, 80%-90% of foreign bodies reaching the gastrointestinal tract will pass spontaneously,10%-20% require endoscopic intervention and 1% require a surgical procedure.[5,6] We present you a case of foreign body ingestion with incidental finding of gastric outlet obstruction in a prison inmate.

PRESENTATION OF CASE:

History: A 21 years old male prisoner with a history of two days old intentional ingestion of metallic key presented to emergency department with complaints of multiple episodes of postprandial vomiting containing undigested food particles, with history of mild abdominal distension.

Clinical examination: soft, non-tender, mild distension, normal bowel sounds heard

Investigations: Radiological investigations were done to confirm the foreign body. Serial radiographs were taken for first 24 hrs at an interval of 6hrs. Due to doubtful location on Xray, a CT scan was done.

In CT over distended stomach measuring approximately 25 x 10 cm with metallic foreign body 4x2 cm noted in the stomach followed by which patient was posted for esophagoduodenoscopy.

Fig 1: Serial erect X Ray abdomen showing foreign body movement.

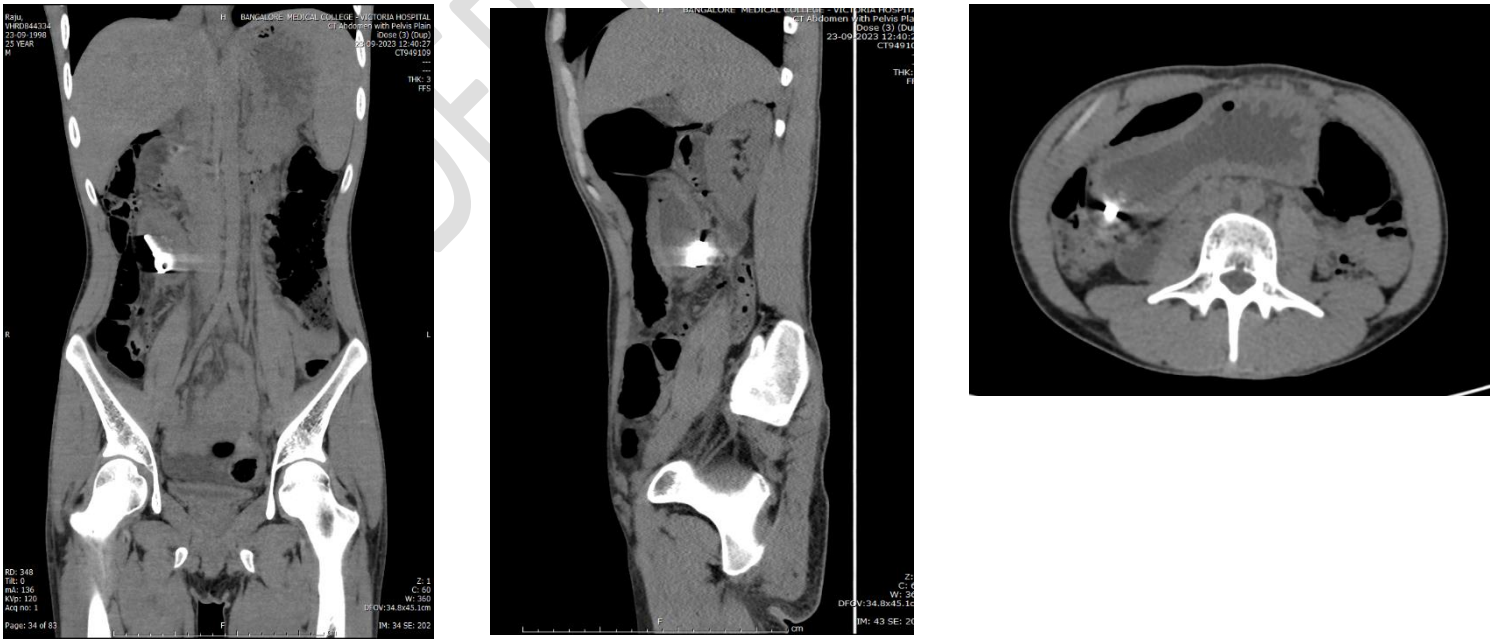


Fig. 2: CT abdomen and pelvis showing distended stomach with key in stomach.

Management: A decision was made to remove the foreign body via endoscopic method under sedation. Food stasis was noted in stomach with pinpoint pylorus, and irregular inflamed surface in pylorus from where biopsy was sent. Key couldn't be visualised and was suspected to be buried under inflamed mucosa. Scope couldn't be negotiated beyond pylorus.

Post endoscopy, patient was initially planned for second attempt of endoscopic retrieval but due to acute deterioration of patient with severe upper abdominal pain, with increasing abdominal distension and persisting vomiting and considering medicolegal implication of prisoner, patient was posted for emergency laparotomy where gastrotomy with retrieval of key with gastrojejunostomy with truncal vagotomy with distal feeding jejunostomy.

Histopathology report from stenosed site showed benign inflammatory lesion with features of both acute and chronic inflammation, suggesting probably a chronic ulcer causing partial pyloric stenosis was triggered by ingestion of metallic key. Recovery was uneventful with superficial surgical skin infection drain removal on post op day 7, feeding jejunostomy on post op day 21 and discharged on post op day 25 after settlement of SSI and removal of all drains and sutures as per request of police incharge.

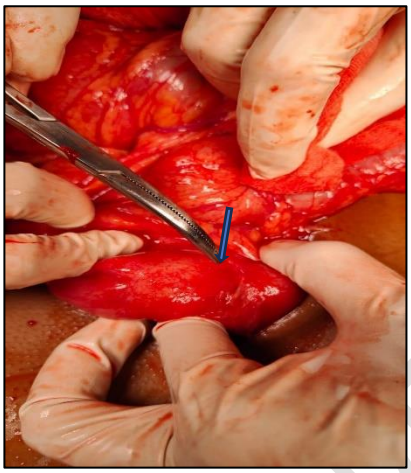
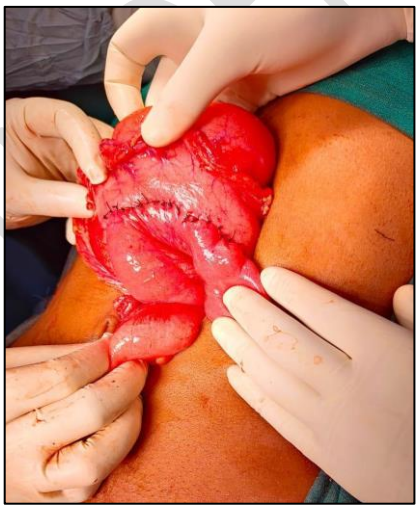


Fig 3 and 4: Image showing retrieved stenosed area in pyloric region, key post retrieval.



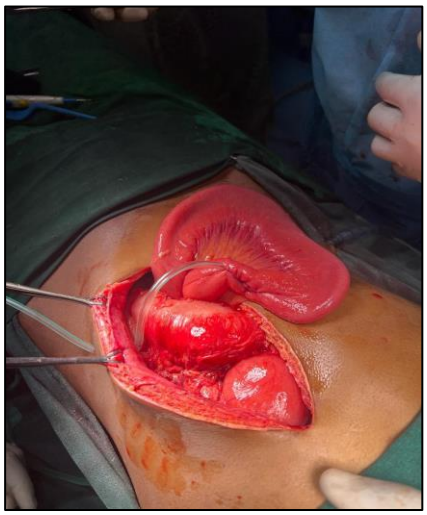


Fig 5 and 6: Image showing gastrojejunostomy and feeding jejunostomy

DISCUSSION:

Management of foreign body ingestion is influenced by the patient's age and clinical condition, size, shape and classification of the ingested material, the anatomic location in which the object is lodged and the technical abilities of the endoscopist.[7] There are 3 sites where an object may fail to pass once it has negotiated-cricopharynx, the upper oesophageal sphincter is the narrowest part of the upper GI tract, the pylorus in the stomach, the ileocecal valve.[8]

The persistence of the infantile form causes late-onset pyloric stenosis, which only manifests clinically later when a triggering event—such as ingesting a foreign body—causes inflammation, edema, or spasms that lead to pyloric occlusion.

Acute inflammation of the pylorus can lead to gastric outlet obstruction manifested by early satiety, anorexia, weight loss, nausea, vomiting. In chronic inflammation stomach can become massively dilated and lose its muscular tone.12% of patients with a peptic ulcer presented with gastric outlet obstruction as a direct consequence of a pyloric canal ulcer with associated pylorospasm.[9]

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CONCLUSION:

Gastric outlet obstruction triggered by acute events like foreign body ingestion is rare presentation. Once identified through imaging studies, prompt investigation should take place with EGD. We report a case of foreign body ingestion with an incidentally detected gastric outlet obstruction that was successfully treated with endoscopic/surgical procedure.

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