

MULTIPLE HOLLOW VISCUS PERFORATION CAUSED BY FOREIGN BODY - A CASE REPORT

ABSTRACT:

Background: Hollow viscus perforation caused by foreign body ingestion or insertion per rectally is a serious and emergency condition that requires prompt diagnosis and prompt surgical intervention. This might be challenging at times, especially in patients with psychiatric abnormality as they tend to present late and might not disclose any history of ingestion or insertion of foreign body. **Methodology:** We present a case of 35 years old male with psychiatric condition and behavioral abnormality with complains of pain abdomen, distention and non passage of stool and flatus for 2 days. Clinical and radiological examinations points towards the diagnosis of hollow viscus perforation. The decision to perform emergency exploratory laparotomy was taken. On exploration, the 2nd part of duodenum and the recto sigmoid junction was found perforated by foreign body. Primary repair of the perforated sites was done after removing the foreign body. **Result:** The patient made a good post operative recovery and the post operative period was uneventful. The patient was discharged on 8th Post operative day after psychiatric consultation. **Conclusion:** The management of hollow viscus perforation caused by foreign body ingestion or insertion requires multidisciplinary approach. Timely diagnosis and timely intervention is crucial for the successful outcome. The role of psychiatrist is crucial in tackling the underlying psychological issues to prevent recurrence.

Key words: **Hollow viscus perforation, psychiatric abnormality, emergency exploratory laparotomy, multidisciplinary approach.**

INTRODUCTION:

In clinical practice, hollow viscus perforation by foreign body is a frequently encountered clinical phenomenon. It can happen unintentionally or intentionally to mental health patients. However, the vast majority of foreign bodies pass through without any issues, just approximately 1% are known to result in complications, including perforations in the gastrointestinal tract. The most common foreign are tooth pick and dietary foreign body such as bone fragments and fish bone ⁽¹⁾. The foreign body ingested or inserted whether accidentally or intentionally can cause perforation of any part of gastrointestinal tract

being most prevalent in the digestive tract at sites of physiological angulation or constriction ⁽²⁾, with the ileal loops accounting for up to 83% of all instances⁽³⁾.

Here we present an unusual case of a young man presented with acute abdomen in emergency department secondary to ingestion and insertion of foreign body per rectally.

CASE REPORT:

A 35 years old male with history of behavioral disturbances on irregular psychiatric medication, presented to the emergency department of AMCH with abdominal pain, distention, non passage of stool and flatus for 2 days. The patient however did not give any history of foreign body ingestion or insertion per rectally even on direct questioning.

On presentation the patient had decreased level of consciousness with a pulse rate of 120 per minute and blood pressure of 80/60mmhg. On examination abdomen was distended, generalized guarding and rigidity with tenderness and rebound tenderness present all over abdomen. Prompt resuscitation of the patient was done with i.v fluids and i.v antibiotic was started. Nasogastric tube and urinary catheter was inserted and blood samples were send for investigation and blood grouping and the patient was kept under strict monitoring.

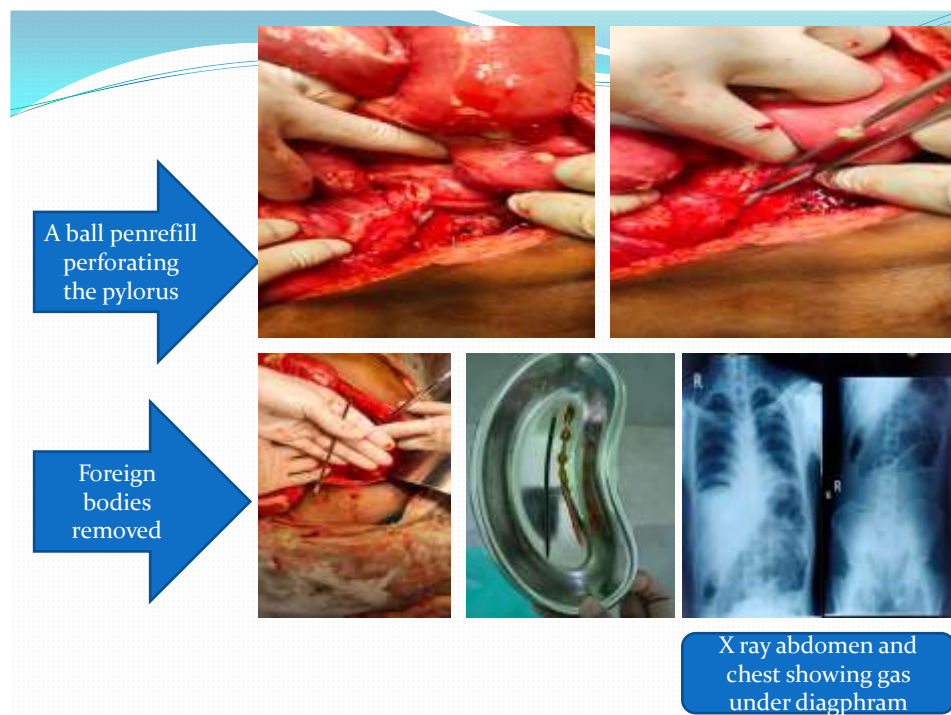
After initial resuscitation the patient was shifted for radiological investigations. X ray abdomen shows peumoperitoneum (gas under diaphragm). USG abdomen shows free fluid in the peritoneal cavity. Laboratory investigations show leucocytosis (TLC 18000/mm³) other parameters were normal. Considering the diagnosis, decision for emergency midline exploratory laparotomy was taken.

On thorough exploration of the abdominal cavity a ball pen refill (size of 10 x 0.5 cm approximately) was found perforating the 2nd part of duodenum. On further exploration another beaded plastic foreign body (size of 10 x 1 cm approximately) was found perforating the recto sigmoid junction.

The foreign bodies were removed and the duodenal perforation was repaired using a two layer closure technique. Similar two layer primary repair of the recto sigmoid perforation was done. Abdomen was closed after thorough peritoneal toileting and placement of drain.

Post operatively the patient was managed with i.v 2nd generation cephalosporin and metronidazole. The patient made a good post operative recovery without complication. Psychiatry consultation was taken and the patient was discharged on the 8th post operative day on oral antibiotic and psychiatric medications.

Fig 1 : Operative process



DISCUSSION:

Hollow viscus perforation caused by foreign body whether ingested or inserted can present with serious clinical condition which may sometime pose with diagnostic and therapeutic challenges especially in children and psychiatric patients as a definitive preoperative history of ingestion may not be obtained ⁽¹⁾. Sometimes the patient is unaware of foreign body ingestion. The most often consumed items are toothpicks and dietary foreign body⁽⁴⁾.

Hollow viscus perforation caused by foreign body can present with highly variable clinical features ranging from subtle symptoms like pain abdomen to overt signs and symptoms such as peritonitis , sepsis and shock depending size, location and time of presentation. In comparison to patients with foreign body perforations in the jejunum and ileum, patients with perforations in the stomach, duodenum, and large intestine were significantly more likely to be afebrile , to have chronic symptoms , to have a normal total white blood cell count , to be asymptomatic or present with an abdominal mass or abscess⁽¹⁾ . Intestinal perforation cause by foreign body may manifests as an acute abdomen emergency that can resemble diverticulitis or acute appendicitis ⁽⁶⁾. After ingesting a foreign substance, patients with neurodevelopmental delays often present late and thus there is often delay in diagnosis and timely intervention. This raises their risk of complications, death, and morbidity since they are unable to provide a complete medical history ⁽⁸⁾.

Conventional X ray though may show pneumoperitoneum, it is not a reliable method in identifying and localizing the foreign body with minimal radio opacity. On the other hand a CT scan can contribute significantly in identifying the foreign body with minimal opacity and thus allowing the exact location of the site and thus allowing proper surgical plan⁽⁵⁾.

Surgical intervention remains a cornerstone of treatment of gastrointestinal perforations although in case of impacted foreign body endoscopic removal may be tried ⁽⁷⁾.

In this case the patient being a psychiatry patient with behavioral abnormality on irregular medication , did not disclose any history of ingestion and insertion on foreign body. The diagnosis was made on clinical grounds and greatly aided by radiological investigations. The key indicative features being abdominal distension, tenderness and rebound tenderness with peumoperitoneum and free fluid on radiological investigations. The management of this patient was focused on immediate exploratory laparotomy which allowed thorough exploration of abdominal cavity and assessment of both recto sigmoid and duodenal perforation.

CONCLUSION:

This case underscores the importance of multidisciplinary approach involving surgeons, radiologist and psychiatrists in management of foreign body in a psychiatric patient. The prompt diagnosis, accurate imaging and timely surgical intervention is crucial in

achieving a favorable outcome. The role of a psychiatrist is crucial in assessment of the patient's mental health to address any underlying psychological issues, provide appropriate counseling or treatment to prevent recurrence.

UNDER PEER REVIEW

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