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A curious case of foreign body induced jejunal obstruction and perforation[☆]



Pushpendra Sarwa*, Ranbir Singh Dahiya, Nityasha, Samir Anand, Chandrabhan, Sekhar Gogna, Deepanshu Gupta, Bhavinder Arora

Department of General Surgery, Pt. B.D.S. Post Graduate Institute of Medical Sciences, University of Health Sciences, Rohtak, India

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ABSTRACT

INTRODUCTION: Accidental and unnoticed ingestion of foreign bodies are not very uncommon. Most of such foreign bodies pass through gastrointestinal tract uneventfully and only on rare instances cause obstruction and/or perforation.

PRESENTATION OF CASE: We are reporting a case in which a 45 yr old male presented to accident and emergency department of our institute with complaints of pain abdomen, greenish vomiting, abdominal distension, fever and non passage of flatus and stool following alcoholic binge 15 days back. On presentation tachycardia, hypotension, generalised abdominal tenderness and guarding were present. After initial resuscitation and investigation diagnosis of perforation peritonitis was made and emergency exploratory laparotomy was done and a single perforation with plastic foreign body protruding through it was found in jejunum 5 cm distal to duodeno-jejunal junction.

DISCUSSION: The majority of ingested FBs that reach the stomach pass uneventfully through the gastrointestinal tract. The majority of cases occur in children. Only 1% of patient of patients requires surgical intervention depending upon nature, size and shape of the foreign body.

CONCLUSION: Present case report intends to draw the attention towards possibility of intestinal obstruction and perforation by a single plastic foreign body. High index of suspicion is needed as this foreign body is not even radio-opaque and cannot be picked up in X-ray investigations. Also with increasing use of such plastic materials there are increased chances of such incidents.

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1. Introduction

Accidental and unnoticed ingestion of foreign bodies are not very uncommon. Most of such foreign bodies pass through gastrointestinal tract uneventfully and only on rare instances cause obstruction or perforation.

Foreign body ingestion is common in children and psychiatric patients and uncommon in normal adults

In this interesting case, a 45 yr old male occasional alcoholic probably ingested a plastic film during alcoholic binge unknowingly and started having greenish vomiting and pain abdomen and on worsening of his condition presented to emergency department in shock. Patient was resuscitated and investigated. Exploratory laparotomy was planned. On exploration the foreign body was removed and perforation repaired primarily.

This case report intends to draw the attention towards possibility of foreign body as sole cause of acute partial intestinal

obstruction followed by perforation at proximal jejunum following an alcoholic binge in an adult patient.

After an extensive search in literature, there is no such case reported till in literature where same foreign body caused obstruction and perforation.

2. Reporting the case

Here in this case as mentioned above a 45 yr old male resident of Village & post office Sisana, Rohtak. A migrant masonry labourer from Chhattisgarh presented to accidental and emergency department of Post Graduate Institute of Medical Sciences, with complaints of Pain abdomen for 15 days; greenish vomiting for 15 days; non passage of flatus and stool for 5 days and distension of abdomen for 3 days.

As per the patient he was apparently alright 15 days back, when after having alcoholic binge at night he developed pain abdomen which was acute in onset, colicky in nature, non-radiating, associated with vomiting, no associated fever, jaundice or urinary complaints were there. Pain was followed by greenish vomiting which occurred 3–4 h after meal. Patient was apprehensive of taking food. Patient took some antispasmodic and antiemetic medications from local quack, he got partial relief and he continued taking such medications with increasing doses. When the patient's condition further

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* Corresponding author. Tel.: +91 8059354151.

E-mail addresses: pushpendrasarwa.cims@gmail.com, dahiyars@rediffmail.com (P. Sarwa).

deteriorated and developed non passage of flatus and stool he was brought to Post Graduate Institute of Medical Sciences.

When the patient was presented to accidental & emergency department of Post Graduate Institute of Medical Sciences, he was febrile, dehydrated, having tachycardia and in shock. Generalised tenderness and guarding were present, bowel sounds were absent. After initial resuscitation patient was investigated. Ultrasonographic investigation showed massive amount of free fluid in peritoneal cavity with septations, X-ray of abdomen showed free gas under diaphragm. Emergency exploratory laparotomy was done. About 21 bilious-fluid was drained and thorough peritoneal lavage was done. A single perforation of size 3 × 1 cm on proximal jejunum 5 cm distal to duodeno-jejunal junction was identified with tip of foreign body protruding through it. Perforation was primarily repaired in two layers and abdomen was closed. Post operatively patient developed bilateral pleural effusion (more on left side than right side) for which pleural tapping was done twice. Ultimately patient was discharged after 10 days of hospital stay, under satisfactory condition.

3. Discussion

The majority of ingested FBs that reach the stomach pass uneventfully through the gastrointestinal tract and the majority of cases occur in children aged between 6 months and 3 years.^{1,2} Coins, marbles, pins, keys, toys, button batteries, stones, nails and rings are some of the common foreign bodies ingested by children.

Accidental ingestion is the most common cause in children. Mental disorders, bulimia and alcohol consumption are the other contributing factors in adults.³ Overall risk of perforation is 1%.⁴ Endoscopic removal is needed in 10–20% of the cases and in about 1% of the cases surgical intervention is required, depending on the nature, shape, size, number and location of the foreign bodies.^{3,4}

The most common site of perforation is the oesophagus, but other sites such as pylorus, duodenum, duodeno-jejunal flexure, ileo-caecal junction, Meckel's diverticulum, or previous surgical site are also prone to perforation due to foreign body impaction.⁶ Various other complications of ingested sharp or pointed foreign bodies such as eyeliner pencil causing stomach and diaphragmatic perforation and empyema,⁷ toothpick causing hepatic inflammatory mass,⁸ small bowel perforation due to a nail⁹ and sewing needle-induced appendicitis¹⁰ have been described.

Present case report intends to draw the attention towards possibility of intestinal obstruction and perforation by a single plastic



Fig. 1. Foreign body protruding out through the perforation in proximal jejunum; tip of artery forceps pointing towards it.



Fig. 2. Extracted foreign body.

foreign body. High index of suspicion is needed as this foreign body is not even radio-opaque and cannot be picked up in X-ray investigations. Also with increasing use of such plastic materials, there is increased chance of such incidents.

This also illustrates possible mechanism behind same foreign body causing the obstruction and perforation. As foreign body lodged in proximal jejunum causing obstruction via flap-valve mechanism and later on due to pressure necrosis at the sharp edge of foreign body resulted into perforation. (Figs. 1 and 2)

Conflict of interest

None.

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None.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and publication of images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request".

Author contributions

Pushpendra sarwa: operative assistant, data collection, and written the case report; Ranbir S. Dahiya: data collection and review; Nityasha: data collection and review; Samir Anand: data collection and review; Chandrabhan: operating surgeon and writing assistance; Sekhar Gogna: operating surgeon and writing assistance; Deepanshu Gupta: operative assistant and writing assistance.

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