Case Report

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An unusual case of multiple intestinal perforations secondary to pica

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ABSTRACT

Habitual ingestion of non-nutritive substances is the characteristic feature of a medical condition known as pica. It is usually associated with nutritional deficiency state, mental illness and at times with pregnancy. Most of the ingested foreign bodies pass through the digestive tract without causing complications however in about 1% cases, it can result in fatal complications such as intoxication, gastrointestinal perforation etc. Here we report a case of multiple intestinal perforations in a 28 year old patient secondary to his psychiatric illness Pica. The aim of this case report is to demonstrate its unusual presentation and to discuss the management of this rare case.

Keywords: Digestive tract, Foreign bodies, Pica, Perforation, Psychiatric illness

INTRODUCTION

Pica is a psychiatric illness characterized by abnormal eating of substances which are largely non-nutritive such as ice, hair, lead, stones, sharp objects etc. It can occur in any age group and is most frequently seen is individuals with mental retardation. Most ingested foreign bodies are expelled in stool without creating any problems and only 1% cause perforation in the digestive system, primarily at the level of the ileum. ^{1,2}

Selivanov et al. reported that, in most cases of foreign body ingestion, the most common foreign bodies ingested were coins, bones, food debris, safety pins and razor blades.³ In the presence of symptoms such as abdominal pain, vomiting, or fever, surgical assessment is indicated immediately.⁴

This case study presents the management and prognosis of a 28 year-old male with multiple intestinal perforations secondary to his psychiatric illness pica.

CASE REPORT

A 28-year-old male presented in the emergency department with acute abdominal pain for the last six hours. He was immediately hospitalized and vitals were noted. Patient was hypotensive with BP 78/40 mmHg. Two liters of pre warmed ringer lactate solution was rushed using two wide bore cannula. Patient's vitals stabilized in the next one hour. A nasogastric tube was inserted for gastric decompression. A digital X-ray abdomen was done which revealed multiple radio-opaque shadows without any free gas under diaphragm (Figure 1). An ultrasonography of abdomen was performed which revealed moderate amount of free fluid in peritoneal cavity with internal echoes suggestive of intestinal perforation. A detailed history revealed patient's psychiatric illness with a habit of eating unusual things.

An emergency laparotomy was done and three perforations were found, one in sigmoid colon, two in

ileum at about 1 foot and 1.5 feet proximal to ileocecal junction (Figure 2).



Figure 1: abdominal radiograph showing radioopaque shadows of a nail cutter, iron nail and a coin.



Figure 2: Foreign body protruding from a perforation in ileum.

Multiple metallic and non-metallic items were extracted out from the perforation site and some were milked through the colon and taken out per rectally (Figure 3). Primary repair of all the perforations was done using vicryl 3-0 round body in single layer and patient was kept nil per oral for next seven days. Patient was discharged on eleventh post-operative day under satisfactory condition with the advice to start psychiatric treatment for the mental disorder.



Figure 3: Foreign bodies removed from intestine which included wooden piece, hair band, folded paper, coin, iron nail, nail cutter, pen refill, polythene etc.

DISCUSSION

Pica is a rare psychiatric illness, DSM-IV defines pica as a form of feeding and eating disorder of infancy or early childhood, characterized by "the persistent eating of non-nutritive substance for a period of at least one month: inappropriate to the developmental level, not part of a culturally sanctioned practice and sufficiently severe enough to warrant independent attention." The word pica comes from the Latin name for magpie, a bird known for its unusual and indiscriminate eating habits. Worldwide, 25% to 33% of all pica cases involve small children, 20% are pregnant women, and 10% to 15% are individuals with learning disabilities.⁵

Accidental swallowing of a foreign body is commonly observed in our clinical practice. However, intestinal perforation associated with an ingested foreign body is rarely seen. Chu et al reported the most common cause of intestinal perforation associated with ingested foreign objects to be fish bones.⁶

Foreign body ingestion can be asymptomatic or may present with severe abdominal pain and life threatening emergencies. Early diagnosis and intervention is important to manage such conditions like intestinal perforation, fistula, ileus etc.

Though there is a tendency for perforations associated with ingested foreign bodies to be in angulated areas of the gastrointestinal tract such as the ileocecal and recto sigmoid junction, they may be seen in all segments of the intestine. In a study by Goh et al, the area of greatest perforation (38.6%) associated with fish bones was found to be the terminal ileum. The foreign body can be found in any location of the gastrointestinal tract or even out of the gastrointestinal tract through a migration process.

Abdominal X-ray helps in visualizing such metallic foreign bodies and free gas under diaphragm, ultrasound detects free fluid in peritoneal cavity whereas CT aids in visualization of non-metallic objects in such cases of foreign body ingestion.

As perforation due to a foreign body leads to life threatening emergency, surgical option is mandatory which may range from a simple primary repair to resection of bowel or sometimes stoma formation.

CONCLUSION

Intestinal perforation in a patient of Pica is a very rare but potentially troublesome clinical entity, whose management depends upon the severity of associated symptoms. This case emphasizes on the importance of considering intestinal perforation due to foreign body ingestion in differential diagnosis in cases of acute abdomen. A proper history together with appropriate imaging provides a high possibility of accurate diagnosis and management of such rare cases.

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