

FOREIGN BODY-INDUCED MECKEL'S DIVERTICULUM PERFORATION: AN UNHERALDED CRISIS

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ABSTRACT

Meckel diverticulum is a rare entity usually denoted by the rule of 2s i.e. a) 2% of population have anomaly, b) 2 inches in length, c) 2 feet from ileocaecal valve. It remains asymptomatic and can rarely undergo complication, the most common being bleeding and obstruction. Perforation is an imperceptible yet an ill-boding precarious complication, which necessitates urgent intervention.

KEYWORDS

Meckel Diverticulum Perforation, Cinnamon.

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INTRODUCTION

Meckel diverticulum, 3-6 cm in length is a true diverticulum as it contains all three layers of intestinal wall supplied by a persistent vitelline artery located on the antimesenteric border of the ileum 50-100 cm from the ileocaecal valve.^[1] It is an incomplete closure of the omphalomesenteric or vitelline duct and maybe present in forms ranging from an unseen bump to a long projection in communication with the umbilicus via a persistent fibrous cord.^[2] It is mostly lined by ileal mucosa, but ectopic, gastric, duodenal, colonic, endometrial, pancreatic tissue, carcinoid, hepatobiliary tissue lining have also been reported.^[3] About 84% remain asymptomatic and are incidentally found intraoperatively.^[3]

CASE REPORT

A 60-year-old male reported to the emergency room with complaints of pain abdomen more at the umbilical region associated with progressive abdominal distension and vomiting since 1 day. It was associated with fever. There were no features of haematemesis, melaena, and altered bladder movement. Patient was a known case of Diabetes Mellitus on regular medication. He had tachycardia (pulse rate 110/minute) and fever (100°F). Clinical examination of abdomen: distended abdomen with guarding and rigidity more in the right iliac fossa with severe tenderness over the umbilicus and right iliac fossa with absent bowel sounds. Per rectal examination was normal.

INVESTIGATIONS

Total count: 21,000 cells/cu. mm (normal: 4000-11,000 cells/cu. mm).

X-ray abdomen erect: air under diaphragm-indicative of hollow viscous perforation [Figure 1].

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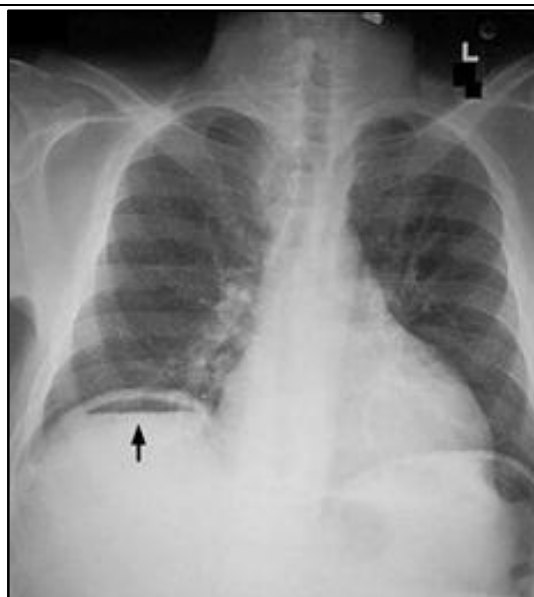


Fig. 1: Air under Diaphragm (Arrow)

A diagnosis of hollow viscous perforation and was planned emergency laparotomy under adequate antimicrobial cover and fluid support.

Intraoperative Findings

Congested, oedematous, Meckel diverticulum with a single small perforation due to a 1 x 0.5 cm wooden tree bark. [Figure 2].



Fig. 2: Inflamed Meckel Diverticulum (Arrow)

Resection of the Meckel diverticulum with end-to-end anastomosis of small intestine was done. The specimen and tree bark was sent for histopathological examination [Figure 3].

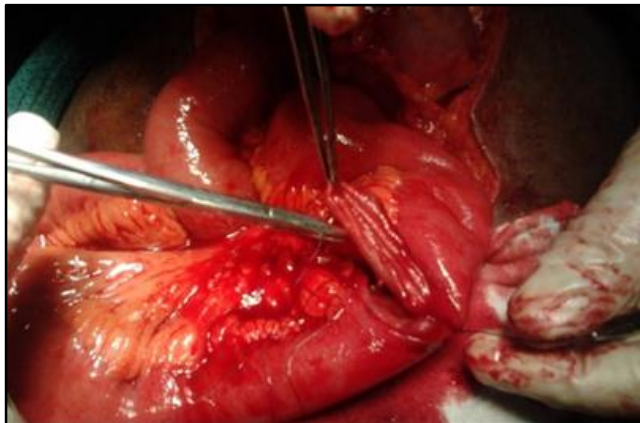


Fig. 3: End-to-End Anastomosis of the Small Intestine

Histopathology Report

Specimen consistent with diverticulitis of Meckel diverticulum and the wooden bark foreign body was found to be cinnamon [Figure 4].



Fig. 4: Cinnamon Bark after Cutting Open the Meckel Diverticulum Specimen

Postoperative recovery of the patient was uneventful.

DISCUSSION

The incidence of Meckel diverticulum is 1-2% in the population, more in young with slightly higher male preponderance, and its perforation is a result of diverticulitis, obstruction-stasis with bacterial infection, and ulceration of mucosa; though reports due to foreign body are rare.^[1,4,5] Lifetime risk of having symptomatic Meckel diverticulum is 4.2%, which decreases with age; with an incidence of perforation being as low as 0.5%.^[6,7] Symptomatic Meckel diverticulum presents with vague symptoms and signs that mimic acute appendicitis with abdominal radiographs valuable in showing perforation or obstruction and Computed Tomography (CT) cannot delineate Meckel diverticulum with certainty.^[7,8,9] Meckel diverticulum perforation can be made

out only during laparotomy, not prior, as it presents with similar features of any other hollow viscous perforation and fish bones account for almost 55% of reported cases and other foreign bodies being needle, nylon bristle of toothbrush, tomato skin, cherrystone with most patients not able to recount any history of such ingestion.^[4,8,10] Though, the management of asymptomatic Meckel diverticulum is a much debated topic, it is quite clear that Meckel diverticulum complicated by perforation warrants a segmental resection followed by anastomosis.^[1,2,3]

CONCLUSION

This rare case report sheds light on the paramount importance of keeping a perforated Meckel diverticulum; a less voiced murky clinical entity in mind when diagnosing and treating a case of hollow viscous perforation. Though very rare; yet literature mentions foreign bodies, still cinnamon (taste giver in traditional Indian foods) induced perforation of Meckel diverticulum is invariably farfetched. Though common in young; this unheralded crisis can occur even in old age as seen in this patient, and an adequate knowledge can foster better scope for early diagnosis of this ailment.

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