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Ileocaecel Stricture with Meckel's Diverticulitis Presented as Intestinal Obstruction: A Case Report

Dr. Jainam Mehta[1], Dr Jignesh Dave[2]

[1]Second Year Resident Doctor, General Surgery Department, PDU Civil Hospital Rajkot

[2]Associate Professor & HOU, General Surgery Department, PDU Civil Hospital Rajkot

Abstract: ***Introduction**: Acute gastrointestinal (GI) obstruction is a common surgical emergency with varied etiologies. Obstruction at the ileocecal junction is a rare cause, often overlooked during differential diagnosis. We report a case of a 26 year-old male presenting with signs and symptoms of acute intestinal obstruction, later diagnosed with a stricture at the ileocecal junction and Meckel's diverticulitis. Surgical intervention led to resolution, and histopathology revealed meckles diverticulitis with appendicitis with reactive lyphadenpathy.*

Keywords: Ileoascending anastomosis, Ileocaecle stricture, Meckel's diverticulum, Small bowel obstruction, Loop ileostomy

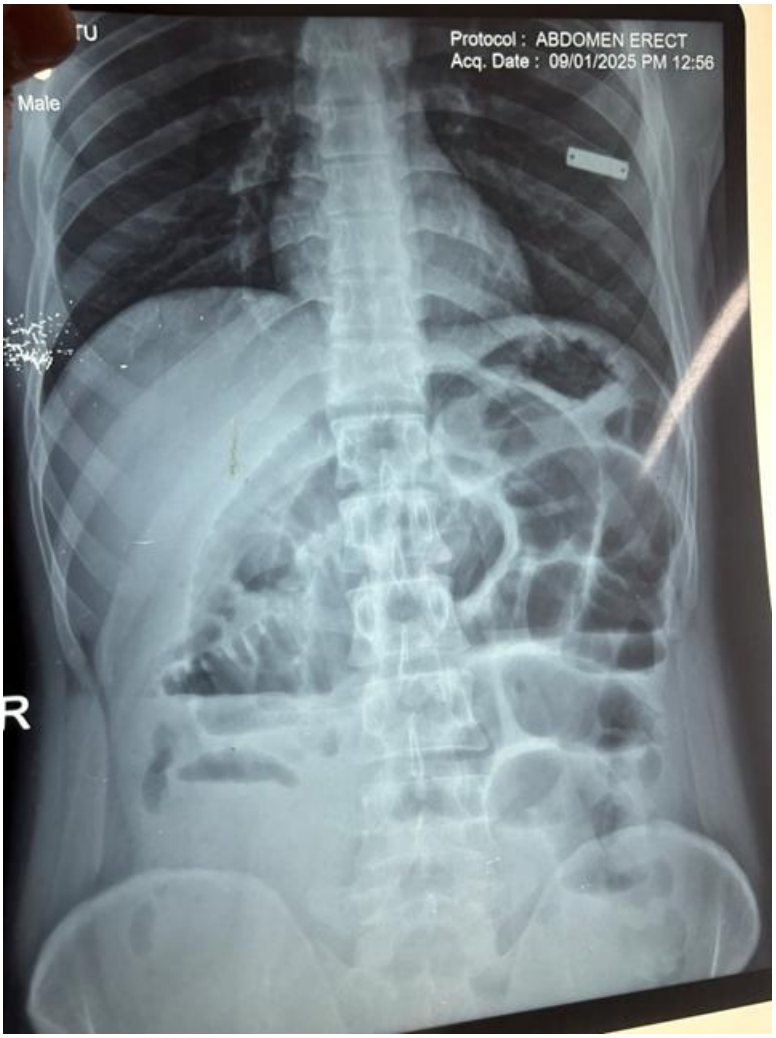
1. Case Presentation

A 26 year old male was admitted to surgery ward with a history of constipation, nausea, vomiting, and abdominal pain. Physical examination showed abdomen distention, generalised tenderness. Rectal examination found to be normal. Patient vitally stable & all hematological investigations are within normal limit. Patient started intravenous fluid and analgesic. A plain abdominal Radiograph showed small bowel dilatation and air-fluid levels. The patient was diagnosed with small bowel obstruction due to meckels diverticulitis and stricture present at Ileocaecle junction and taken up for exploratory laparotomy.

2. Clinical Discussion

On exploration, stricture present at Ileocaecle junction and Meckel's diverticulum 5 cm length with broad based found 30cm proximal to the IC Junction; resection of Ileocecal junction with proximal loop ileostomy with resection of meckles diverticulum and stricture was done with appendicectomy. Sips orally started on day 3 and drain was removed on day 5 and patient discharge.

HPE suggestive of meckles diverticulitis with appendicitis with reactive lymphadenitis.



Clinical discussion: Small bowel obstruction are most commonly caused by adhesions, hernias, neoplasms, or inflammatory strictures [1], with most caused by extraluminal adhesions due to postoperative inflammatory changes [2]. Although our patient had a history of abdominal surgery, he had no evidence of adhesions or extraluminal pathology. His SBO was secondary to intraluminal strictures. Intraluminal strictures are primarily caused by congenital defects, inflammation, ischemia, neoplasms or radiation. Congenital atresia is a common cause of neonatal intestinal obstruction. Jejunoileal atresia primarily results from intrauterine vascular events and tends to present early in life [3]. Late presentation of jejunal atresia has been reported; however, this is associated with other abnormalities [4]. It is unlikely that our patient had such a condition that had remained undiagnosed since birth. Inflammatory bowel diseases, such as Crohn's disease, may also cause intestinal strictures. Crohn's disease presents with full thickness inflammation of the intestinal wall. Obstruction occurs through either acute inflammation leading to occlusion, or through chronic inflammation leading to strictures. Our patient had no clinical or pathologic evidence of acute or chronic inflammatory bowel disease. Chronic inflammatory bowel disease strictures also tend to be longitudinal and localized to the ileum [5, 6]; Intestinal ischemia may also cause intestinal strictures and usually occurs in the presence of trauma, drug use, or vascular disease. The patient had no history of vascular disease or abdominal trauma, and reported no history of postprandial abdominal pain or fecal blood, which might indicate chronic intestinal ischemia. Cases of intestinal ischemia usually reveal some degree of mucosal ulceration and necrosis, with associated intestinal fibrosis and vascular disease [7]. A Medline search revealed no previous cases of sequential, stenotic strictures of the small intestine. Intraoperatively, the intestine was viable and the mesenteric vessels had strong pulses. On pathologic examination, the patient had no evidence of mucosal irritation, intestinal fibrosis, or vascular pathology. Malignancies may be another cause of intraluminal strictures. Benign tumors are the most common (i.e., leiomyomas); however, malignant lesions are more likely to have a symptomatic presentation. Melanoma is the most common metastatic malignancy of the small intestine and adenocarcinoma is the most common primary malignancy [8]. Additionally, radiation therapy used to treat intraabdominal masses may cause intestinal webs or scarring [9]. However, the patient had no history of malignancy or radiation therapy, and the pathology revealed no evidence of malignancy. Chronic nonsteroidal anti-inflammatory (NSAID) usage may also cause intraluminal pathology [10]. With newer imaging modalities such as capsule endoscopy, the small intestine is increasingly being recognized as a site of NSAID-induced toxicity. Mucosal damage is primarily mediated by a cycloxygenase-independent mechanism, but may also be caused by cycloxygenase-dependent mechanisms [10]. NSAID usage may cause either longitudinal or concentric strictures; however, our patient had no history of chronic NSAID usage, and there was no pathologic evidence of mucosal ulceration or inflammation. Other possible

sources of intestinal stricture are parasites (e.g., Ascaris) or bacteria (e.g., Mycobacterium tuberculosis); however, the patient had no evidence of bacterial or parasitic infection. In conclusion, in this report, we describe our finding of sequential, stenotic intraluminal strictures of the small intestine, which led to SBO. The unusual sequential, concentric nature of the strictures, along with the lack of evidence of inflammatory bowel disease, vascular disease, or malignancy is believed to be unique. This lack of a clearly defined etiology of the patient's strictures made this an intriguing case.

3. Conclusion

Ileocecal strictures are a rare but important cause of acute GI obstruction. Timely diagnosis and surgical intervention can lead to favorable outcomes. Awareness of this entity is crucial for surgeons and gastroenterologists.

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