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MECKEL'S DIVERTICULUM AS A CAUSE OF SMALL BOWEL OBSTRUCTION : A CASE REPORT AND REVIEW OF LITERATURE

General Surgery

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KEYWORDS

INTRODUCTION

The leading causes of small bowel obstruction in developing countries such as India include adhesions followed by carcinoma and strictures (mainly due to Tuberculosis) (1). Meckel's diverticulum is one of the most common congenital malformation of the gastrointestinal tract (2) which presents most commonly in childhood. In adults, it remains asymptomatic. When symptomatic, gastrointestinal bleeding is the most common presentation.(3) It is difficult to diagnose radiologically and in most asymptomatic individuals, it cannot be distinguished from the normal bowel.

CASE PRESENTATION

A 31 year old male presented to the emergency department with complaints of abdominal distension and pain in abdomen since 2 days that was diffuse in nature and persistent. It was associated with obstipation and multiple episodes of vomiting. He also had reduced appetite and decreased urination. He had history of cervical tubercular lymphadenopathy at the age of 9 years for which he had completed a course of ATT for 9 months. There was no history of fever, weight loss or similar history in the past.

On examination, patient was vitally stable with diffuse tenderness on per abdomen examination. On auscultation, hyper peristaltic bowel sounds were heard.

His routine blood investigations (complete blood count, electrolytes, liver and renal function tests, erythrocyte sedimentation rate) were within normal limits Xray Abdomen (Erect) was suggestive of multiple air fluid levels (Fig-1)

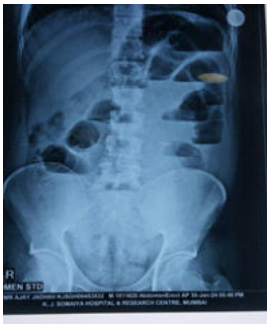

Fig- (1)

Contrast Enhanced CT Scan (CECT) was done that was suggestive of dilated small bowel loops, predominantly the jejunal and ileal loops, with transition point in the proximal ileal loops(Fig-2). The patient was conservatively managed with nasogastric tube, intravenous fluids, foleys catherisation and was discharged on stabilisation. With working diagnosis of ileal stricture secondary to Koch's abdomen, diagnostic laparoscopy sos resection anastomosis was planned after 6 weeks.

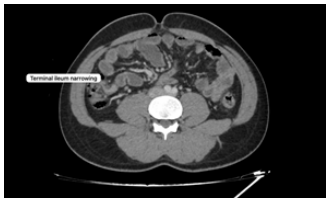

Fig- (2)

On follow-up, CECT Enterography was done which was suggestive of short segment 1.5 cm narrowing in terminal ileum with small bowel faeces sign with submucosal fat proliferation in terminal ileum (Fig-3)

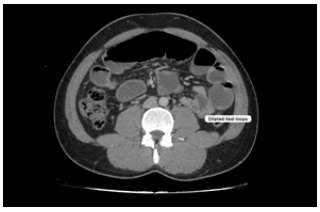

Fig-3

During laparoscopy, multiple ileal loops were adherent in right iliac fossa hence decision was taken to do an exploratory laparotomy(Fig-4). Intraoperatively, adherent ileal loops were separated by sharp dissection. About 6 X 5 CM sized diverticulum (Meckel's diverticulum) was present in distal ileum with its tip adherent to lateral abdominal wall in right iliac fossa(Fig-5). Resection and anastomosis of distal ileum was done. (Fig-6)

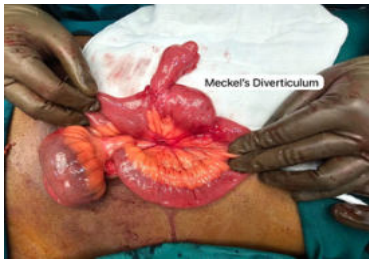

Fig-4

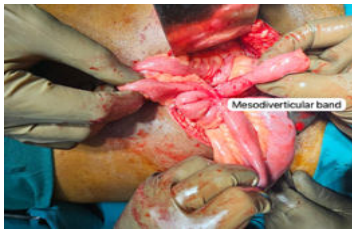

Fig-5

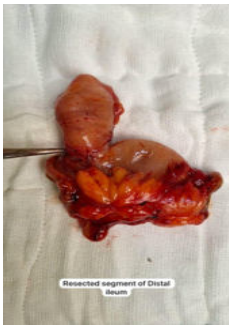

Fig- 6

Histopathology findings was consistent of Meckels Diverticulum (Fig-7).

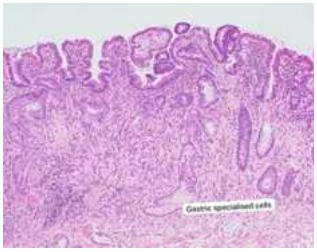

Fig -(7)

DISCUSSION

Small bowel obstruction is more common in adults and is one of the common causes of abdominal pain that makes them present to the emergency department. The usual causes of abdominal adhesions (due to scar tissue from previous surgeries), hernias, cancerous tumours, inflammatory bowel diseases, diverticulitis, ingestion of foreign body, radiation therapy (4).

Meckel's Diverticulum is considered to be one of the most common congenital malformations of the gastrointestinal tract (2). It is considered as a true diverticulum as it arises from all 3 layers of the intestine mainly from the anti mesenteric border. It usually follows the "Rule of 2s"- most common age of presentation is 2 years, occurs in 2 % of the population, 2 inches long (5cm), 2/3rd have ectopic mucosa, 2 feet (50-60cm) from the ileocaecal valve, 2 types of ectopic tissue seen (5).

Intestinal obstruction caused by Meckel's diverticulum is usually due to various mechanisms including entrapment of ileal loop in mesodiverticular band intussusception, volvulus, torsion, inversion, herniation (Littre's hernia) or inflammation(6). 36.5% of cases have complications when presented with obstructive symptoms. True clinical picture is obscured by poor pre- operative diagnosis in symptomatic patients representing only 0.08% of the total population (7). The definitive treatment of symptomatic Meckels diverticulum is surgery, laparoscopic or via laparotomy. (8)

In a case series mentioned by Himal Bikram Bhattarai, Madhur Bhattarai et Al, 3 similar cases were published where Meckel's diverticulum caused intestinal obstruction(6). As a summative of the case series, derivation is made that most of the time, Meckel's diverticulum remains asymptomatic and clinical features arise only when complications manifest such as obstruction, bleeding, diverticulitis. Standard treatment for all the three cases was surgery which was either diverticulectomy or ileal resection. Surgery at the earliest is needed to prevent gangrene or strangulation.

CONCLUSION

The complications of Meckels diverticulum include obstruction, bleeding, diverticulitis. It is considered to be one of the differential diagnosis when considering small bowel obstruction. Patients of the younger age group are rarely diagnosed due to its difficult diagnosis preoperatively and also the fact that it cannot be ruled out from other intraabdominal pathologies easily. Surgery mainly is diverticulectomy and ileal resection anatomosis in some cases. However, action must be taken at the earliest to prevent gangrene or strangulation in symptomatic patients.

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None.

CONFLICT OF INTEREST

No potential conflict of interest was noted.

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