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SHALL FOR RESERRE	Original Research Paper	General Surgery
Fringernational	A RARE CASE OF MESODIVERTICULAR BAND CAUSING INTESTINAL OBSTRUCTION	
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ABSTRACT Meckel's diverticulum is the most common congenital anomaly of the small intestine. Common complications related to Meckel's diverticulum include hemorrhage, intestinal obstruction and		
inflammation. Small bowel obstruction due to mesodiverticular band of Meckel's diverticulum is a rare complication.		

KEYWORDS : Meckels diverticulum, mesodiverticular band, intestinal obstruction

INTRODUCTION:

Majority of small bowel obstruction cases results from postoperative adhesions and hernia. Meckel's diverticulum is the most common congenital anomaly of the gastrointestinal system. It originates from failure of the vitelline duct to obliterate completely, which is usually located on antimesenteric border of the ileum. Its incidence is between 1% and 3%. Meckel's diverticulum occurs with equal frequency in both sexes, but symptoms from complications are more common in male patients. Most of the Meckel's diverticula are discovered incidentally during a surgery performed for other reasons. Hemorrhage, small bowel obstruction, and diverticulitis are the most frequent complications. Histologically there are heterotopic gastric and pancreatic mucosa are observed . Involvement of the mesodiverticular band of the diverticulum is rarely seen. This case report presents the diagnosis and management of a small bowel obstruction due to mesodiverticular band of a Meckel's diverticulum

Case report:

A 52 yr male patient admitted with abdomen pain, obstipation, vomiting for 3 days.

Clinically tachycardia was present, abdomen examination showed abdomen distension, with tenderness in Umblical, both Iliac regions, bowels sounds was absent Laboratory investigation showed Leucocytosis and all other parameters are within normal limits X ray abdomen showed few dialated small bowel loops. And Cect abdomen was done showing Dilated Small bowel loops with air fluid levels and transition point near terminal ileum.

Emergency laparotomy was proceeded 40cm from ileocecal junction Meckels diverticulum was found with inflammation at tip and mesodiverticular band from the tip of Meckels causing obstruction of ileum 20cm proximal to Meckels diverticulum. Band released and resection and anastomosis of ileal segment with Meckels Diverticulum Done. Rest of small bowel examined and found normal Pt recovered without any complications and discharged after 8days

Intraoperative picture showing Meckels diverticulum and diverticular band



Intraoperative picture showing the transition point of obstruction



DISCUSSION:

Meckel's diverticulum was originally described by Fabricius Hildanus in 1598. However, it is named after Johann Friedrich Meckel, who established its embryonic origin in 1809. Meckel's diverticulum is the most common congenital anomaly of the small intestine, with a prevalence of approximately 1-3%. Meckels diverticulum is a true diverticulum containing all layers of the bowel wall. The average length of a Meckel's diverticulum is 5cm length average and diameter of upto 2cm. The mean distance from the ileocaecal valve ranges from 45-60cm. Most cases of Meckel's diverticulum are asymptomatic, and the estimated risk of developing lifetime complications of Meckel's diverticulum is around 4%.

Most meckels are identified incidentally. Most common clinical presentation is bleeding 25-50% of cases. Among the symptomatic patients, two types of heterotopic mucosa (gastric and pancreatic) are found histologically within the diverticula. The frequent complications of Meckel's diverticulum are hemorrhage, intestinal obstruction and diverticulitis.

Intestinal obstruction is the second most common complication of Meckel's diverticulum. There are plenty of mechanisms for bowel obstruction arising from a Meckel's diverticulum. Obstruction can be caused by trapping of a bowel loop by a mesodiverticular band, a volvulus of the diverticulum around a mesodiverticular band, and intussusception, as well as by an extension into a hernia sac (Littre's hernia). Similarly, as in our case; obstruction can be caused by trapping of a bowel loop by a mesodiverticular band. The important aspect of our case is clear demonstration of the mesodiverticular band of a Meckel's diverticulum.

Diverticulitis accounts for 10-20% of symptomatic cases more in adults. Progression of diverticulitis may lead to perforation and peritonitis. Neoplasm can also occur in Meckel's diverticulum, NET is the most common malignant neoplasm, adenocarcinoma, GIST, Lymphoma are other types of malignancies.

Conventional radiographic examinations are difficult for diagnosing meckels diverticulum.Plain radiography, Ultrasonography, and CT scaning all are of limited value and less useful in preoperative diagnosis. In children Tech 99 pertechnate is useful in diagnosis with sensitivity of 85% and specificity of 95%. On computed tomography (CT), Meckel's diverticulum is difficult to distinguish from normal small bowel in uncomplicated cases. However, a blind-ending fluid or gasfilled structure in continuity with the small bowel may be revealed. Abdominal CT is used for complicated cases such as intussusceptions. CT can help to confirm the presence of intussusception and distinguish between lead point and nonlead point intussusceptions.

In asymptomatic patients; whether all cases of incidental Meckel's diverticula should be resected or not is an unresolved question. On the other hand, for the symptomatic patients; treatment should always include resection of the diverticulum or the segment of the bowel affected by the pathology.

CONCLUSION:

Meckels diverticular band is rare cause of obstruction but both clinically and radiologically difficult to diagnose preoperatively.Hence mesodiverticular band should be considered as a diffrential diagnosis in small bowel obstruction case.

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