

Unusual Location of Meckel's Diverticulum At Mesenteric Border of Ileum

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ABSTRACT

Meckel's diverticulum is a vestige of omphalomesenteric duct that does not degenerate by the eight week of gestation. It is amongst the commonly occurring abnormality of the intestinal tract. It is a true diverticulum that involves all layers of intestinal wall. In this case report we present a female patient operated for acute appendicitis and on exploration found to have Meckel's diverticulitis with location of diverticulum on mesenteric border. Patient underwent segmental resection and anastomosis of ileum.

Key words Meckel's diverticulum, Meckel diverticulitis, Intestinal duplication cyst, Location.

INTRODUCTION:

Meckel's diverticulum is amongst the commonly occurring abnormality of the intestinal tract. It receives blood supply from right vitelline artery which later becomes superior mesenteric artery. It can be either in free form or connected to umbilicus through a fibrous band.¹ Characteristic features of Meckel's diverticulum is usually found in 2% of the population, located about two feet from ileocecal junction at antimesenteric border. It is about two inches long and can contain two types of ectopic mucosa namely gastric and pancreatic. Most of the patients present in first two years of life.² Meckel's diverticulum can have varied presentation like intestinal obstruction, inflammation or diverticulitis, bleeding, intussusception, and as a part of hernia.³ Chaffan et al described a rare variety of Meckel's diverticulum located at mesenteric border caused by the pulling force from a persistent vitelline artery.⁴ Few cases have been reported in literature where it was found at mesenteric border intraoperatively. In this report one such patient is reported who was misdiagnosed as having acute appendicitis.

CASE REPORT:

A 35-years old female presented with history of generalized abdominal pain and nausea for the last three days that later localized to right iliac fossa. On examination she had tenderness in right iliac fossa

and umbilical region. Total leucocyte count was increased. Ultrasound abdomen and x-ray erect abdomen were normal. A provisional diagnosis of acute appendicitis was made and intravenous antibiotics started but her condition did not improve. She was then taken to operating room and surgery was done through a grid-iron incision. At exploration normal appendix was found. Small bowel was then examined for any other pathology. It revealed presence of Meckel's diverticulum with diverticulitis. Meckel's diverticulum was located at mesenteric border and was broad base (Fig. I & II). The adjacent part of ileum was also inflamed. Segmental resection of ileum with diverticulum and anastomosis was done. Specimen was sent for histopathology. Patient had uneventful recovery and discharged after six days. She remained well in postoperative period at follow up. Histopathology showed Meckel's diverticulum with diverticulitis.

DISCUSSION:

There are different theories proposed about the etiology of Meckel's diverticulum on mesenteric border. One theory suggests that it is due to a small vitelline artery making a mesodiverticular band that drags the diverticulum towards the mesenteric border during growth period. Another factor postulated is an inflammatory or congenital adhesions being responsible for mesenteric location.⁵ Segal et al reported a case of acute appendicitis with incidental findings of an inflammatory mass at the mesenteric border of terminal ileum occurring near the ileocecal junction. A confirmed diagnosis of atypical Meckel's diverticulum or duplication cyst could not be made as the gastric mucosa may be present in both the conditions.⁶ In a case report, child presented with painless bleeding from rectum and investigations revealed Meckel's diverticulum. Diverticulum had

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Fig I: Broad base meckel's diverticulum



Fig II: Inflamed Meckel's diverticulum located at mesenteric border

independent blood supply as opposed to ileal duplication cyst which receives blood supply from ileal wall and also shares common wall.⁷

Meckel diverticulum may be found incidentally while dealing with other pathologies or at diagnostic imaging. In case of abnormal location like mesenteric Meckel's diverticulum, it can invaginate into mesentery leading to hemorrhage and other adverse effects.⁸ For symptomatic Meckel's diverticulum the treatment of choice is surgical resection. This can

be done by different methods like diverticulectomy, segmental intestinal resection and anastomosis, or wedge resection.⁹ As mesenteric diverticulum can invade the mesentery causing bleeding, it should be resected

CONCLUSION:

Mesenteric location of Meckel's diverticulum is often discovered intraoperatively. In patients presenting with acute abdomen it should be considered as a differential diagnosis.

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