

## BOWEL OBSTRUCTION IN MECKEL DIVERTICULUM

### *Obstrução intestinal por divertículo de meckel*

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### INTRODUCTION

**M**eckel's diverticulum is the most common congenital anomaly of the gastrointestinal tract, occurring in about 2% of the population<sup>1</sup>. It is true diverticulum located on the anti-mesenteric border of the ileum, and usually situated between 30 and 150 cm from the ileocecal valve. Occurs because of incomplete closure of the omphalomesenteric duct between the 7<sup>th</sup> and 8<sup>th</sup> week of pregnancy<sup>3</sup>.

### CASE REPORT

Are reported two cases of intestinal obstruction from internal hernia caused by Meckel's diverticulum.

Patient A: Male 18 years was admitted to the emergency department presenting distended abdomen, dehydrated, pallid, with fecal appearance vomiting, absence of bowel sounds and not eliminating gas or stool.

Patient B: Male 42 year-old, heavy alcoholic and smoker consumer, was admitted reporting abdominal pain about three days and no release of gas or feces. Were observed distended abdomen and fecal appearance vomiting. Laboratory tests carried out were: hemoglobin 14.2, 8040 leukocytes (3% bastons and 76% segmented), amylase 141, Na<sup>+</sup> 138, K<sup>+</sup> 3.4, creatinine 0.8, and urea 45. Nasogastric tube was placed with immediate drainage of 400 ml of darkened secretion. Chest

X-ray revealed no pneumoperitoneum but gastric fluid level. Plain abdominal radiograph revealed a dilated small bowel loops and several important fluid levels.

Both patients underwent laparotomy. In patient A, was found at 40 cm from the ileocecal valve structural aspect of ileum anti-mesenteric diverticulum, with fibrous cord connecting it to the abdominal wall, which caused the twist and consequent intestinal obstruction. The fibrous cord was sectioned and the diverticulum was resected with primary repair using absorbable suture. The pathological study resulted in small intestinal with inflammatory infiltrate and no sign of ectopic tissue. The patient was discharged on the 4<sup>th</sup> postoperative day, with no complication. In patient B, was found at 60 cm from the ileocecal valve, structural aspect of anti-mesenteric border diverticulum, with fibrous cord connecting the diverticulum to the mesentery, leading to intestinal twisting and consequent intestinal obstruction. The cord was sectioned and the diverticulum resected with primary repair using absorbable suture. Histopathology examination showed inflammatory infiltrate and no sign of ectopic tissue.



FIGURE 1 - Diverticulum causing internal hernia (intrabdominal vision)

## DISCUSSION

Meckel's diverticulum has asymptomatic course and most often is found during laparotomies or necropsies<sup>4,5</sup>. Usually the diagnosis is made when complications arise represented by hemorrhage, intussusception, intestinal obstruction by volvulus or internal hernia, perforation, diverticulitis or neoplasia<sup>2</sup>.

Intestinal obstruction may occur as a result of herniation or intussusception around a fibrous cord which extends from the abdominal wall to the diverticulum, to the meso or to intestinal segment; it can lead to severe obstructive torsion, even with necrosis and perforation.

The mortality from the complications of Meckel's diverticulum is around 6% to 7.5%, and postoperative complications by approximately 11%<sup>12</sup>. Internal abdominal hernias are uncommon causes of intestinal obstruction accounting for only 2% of risk factors<sup>14</sup>. Therefore, the diagnosis of intestinal obstruction by internal abdominal hernia is difficult, but should be suspected in patients suffering from intestinal obstruction and history of laparotomy<sup>14</sup>. In young patients without prior laparotomy, the diagnosis is even more unlikely. It is noteworthy, then, diagnostic and therapeutic operation<sup>14</sup>. The preoperative diagnosis by radiology, computed tomography or arteriography is possible in a subocclusive status<sup>15</sup>. However, due to time constraints, typically the diagnosis is performed only at laparotomy. Meckel's diverticulum causing internal hernia an intestinal obstruction is rare event,

with nonspecific signs and symptoms<sup>16</sup>. Therefore, there is high mortality rates associated with this type of internal hernia<sup>8</sup>. Morbidity and mortality can be reduced with early operation<sup>15</sup>.

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